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ABSTRACT

Approximately 250 abstracts of currently active (1975-1976) British research into child psychiatric disorder and normal social development are presented. It is explained that the information was gathered from a 1974 survey of research and education organizations, child psychiatrists at medical schools, and the heads of academic departments of psychiatry, child health, and psychology. Entries include names and addresses of staff involved in the research, title, and a brief abstract. Abstracts are organized into the following 11 topic areas: methodological studies, prevalence and natural history of disorder, general clinical studies (covering such areas as affective disorder, aggressive behavior and hyperactivity syndrome, and autism), psychiatric disorder in children with physical illness, later effects of obstetric and perinatal abnormality, treatment studies, development of children with family and social disadvantage, school influences on behavior, personality and individual differences, development of communication and social relationships within the family, and development of extra-familial relationships. Also included is a chapter on general information about the research and a critical review emphasizing strengths and weaknesses. (CL)

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CHILD BEHAVIOUR RESEARCH

A SURVEY OF BRITISH RESEARCH INTO CHILD PSYCHIATRIC DISORDER AND NORMAL SOCIAL DEVELOPMENT – 1975/1976

A Report to the MRC Child Psychiatry Sub-Committee
Compiled by D. Shaffer

London: Medical Research Council

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1. Introduction

Scope

This survey has set out to provide a description of currently active British research into child psychiatric disorder and the normal social development of children. The following areas have been specifically excluded:

mental subnormality - a major sub-speciality;
delinquency;
cognitive and linguistic development, except where this has been linked to the study of social development, or to abnormal processes in disturbed children;
animal research.

The criterion of 'currently active research' may have led to apparent inconsistencies. The aim has been to include only those studies in which strategies or methods were being actively formulated and piloted, or studies in which data collection or analysis was in progress. It was decided not to include studies in which analysis was complete or investigations which were being written up or were awaiting publication. The survey therefore includes studies in which data analysis is continuing even if preliminary results have been published, but excludes completed studies even if unpublished.

Method

An initial postal survey was carried out in the autumn of 1974. This set out the aims and limits of the survey and requested titles of relevant projects. Postal enquiries were sent to:

all child psychiatrists attached to a postgraduate or undergraduate medical school; the heads of all academic departments of psychiatry; the heads of all academic departments of child health; the heads of all academic departments of psychology.

Similar enquiries were made to the following organisations:

Medical Research Council; Social Science Research Council; Department of Health and Social Security; Department of Education and Science; Home Office; National Children's Bureau; Tavistock Institute; National Foundation for Educational Research; Nuffield Foundation; British Epilepsy Association, Mental Health Trust and Research Fund.

In addition relevant research in several departments of sociology, social administration and education has been included.

All the child psychiatrists who reported research interest were visited and interviewed and the resulting abstracts are an amalgam of their written protocols and the information that they provided during interview. A similar procedure was adopted with a selected number of other departments. Abstracts of other research projects were prepared from written protocols submitted by the researchers themselves.

Presentation

The bulk of the survey is in the form of abstracts. These have been arranged under 11 main headings set out as separate sections A-K. Individual abstracts are referred to in the text as (A1) etc. They are preceded by general comments on the research (chapter two), and followed by a critical review which emphasises general strengths and deficiencies.

No classification can be completely satisfactory; there are treatment studies which will have implications for psycho-pathology, methodological studies which

will have implications for treatment, and so on. Many of the studies set out to look at more than a single problem. An attempt has been made to reduce the effect of this overlap by cross-referencing at the end of each section.

All abstracts were returned to the principal research worker, who was asked to verify points of fact and emphasis. Any amendments have been incorporated in the present version of the survey. The survey was carried out in 1975 and inevitable delays may have rendered part of this study out of date by the time of publication.

2. The Research

Methodological studies (see *chapter 3, section A*)

Much of the research referred to in this review has involved the development of methods to study problems particular to a given project. However, section A deals with studies which systematically examine methods and instruments which have a more general application.

The widening of child psychiatric research over the past decade has been associated with the development of new methods for measuring normal and disordered child and family behaviour. In carrying out this review, it became apparent that certain of these methods were widely used and that in several cases the existence of measures or techniques acted as a stimulus to begin a study. The development of methods therefore not only serves to improve measurement, but also has an important effect on widening the base from which research work is carried out.

Much methodological work has been directed towards devising instruments with which to measure disorder. In the United States the emphasis has been on the development of 'behaviour inventories' such as the Peterson Quay Behaviour Inventory and the various scales developed by Conners and his associates at Massachusetts General Hospital. In these cases the scales were derived empirically from a wide range of problem behaviours and were subsequently refined by statistical techniques. Their development has allowed for increased sophistication in the planning of drug studies, and a compendium of scales has been collected and circulated by the National Institute of Mental Health to interested workers. Although reasonably sensitive to showing change in the more limited setting of the school classroom, these instruments remain largely insensitive to change at home with its wider range of behavioural possibilities and the greater involvement of the parent/rater. Questionnaire measures have also been developed in Great Britain, the most frequently used being the Rutter classroom and parent scales and Stott's Bristol Social Adjustment Guide (BSAG). The former were developed as screening instruments for use in large scale surveys, the latter as an instrument to predict future delinquency. However, the demand for readily administered behaviour measures has been such that both the Rutter scales and the BSAG have been used in a wide variety of studies as diagnostic instruments without due regard to their limitations.

The Rutter scales have previously been validated with reference to a multi-faceted psychiatric evaluation. Rutter et al. at the Institute of Psychiatry (A12) are now working to prepare a manual which will provide validation and reliability data for children of different ages and in different settings as well as correlational data with tests of intelligence and attainment. Kolvin and his colleagues (A8) are examining the degree of congruence or overlap between the Rutter scales and other school based measures of disturbance. The validity of the BSAG has not yet been tested in the same way. The Guide was used at ages 7 and 11 on the 1958 cohort in the National Child Development Survey and in many other studies listed in this survey. This Guide is long and includes inferential items which increase the likelihood of unreliability. Ghodsian (A6) at the National Children's Bureau is now working on the internal consistency of the scale, an exercise which may lead to its abbreviation and simplification, and on cross-referencing scores against other measures of disorder.

An important British contribution to methods has been the work by Rutter, Brown, Wing and Graham over the past decade in developing an interviewing technique which draws upon the clinical skills of the interviewer whilst at the same time imposing a structure and rating system that permits a high degree of inter-rater reliability. Interviews have been developed for the assessment of problem behaviours in children, for parental psychiatric state and for quality and characteristics of home life. Brown and his associates at Bedford College, whose interest is primarily in the determinants of depression in women, are continuing to develop and refine interview measures (A2) which will ultimately be of value in the measurement of parental interaction and family support systems.

The interview process is itself being studied by Cox and his associates who are investigating the effects of interviewer style and behaviour on the amount and type of information obtained during diagnostic assessment. This study is also intended to be of value in clinical practice.

The measurement of individual ('temperamental') differences in the child has relied largely on interview techniques or the use of the Carey Scale. Concern about the validity of this approach is leading Dunn and Wooding (A17) and Wolkind et al. (G17) to cross-check interview data against naturalistic observations of the child. Douglas et al. (A16) whose primary interest has been in infant effects on mother-infant interaction, have devised a series of automated devices for cross-checking on mothers' accounts of both infant and interactive behaviours.

Observational methods are widely used by mother-infant researchers, often within the artificial confines of the experimental laboratory. The range of behaviours that can be noted is large and this in turn imposes a stress during the process of data reduction and handling. In a linked series of mother-child observational studies Schaffer and Crook at Strathclyde are working on the preparation of a full repertoire of mother-infant behaviours as a preliminary to their later simplification and abbreviation (J17). Hinde et al. (A18) are studying nursery school children in order to prepare a method for coding observational data on peer-peer interactions. A number of investigators are concerned about the validity of behaviours seen in the laboratory or in brief observation sessions at home. Blurton Jones (A14) has planned a series of experiments to measure the impact of the observer's presence and the effect on reliability of different recording techniques. Mitchell and Coleman (A10) and Coleman et al. (A15) intend to standardise and adapt observational techniques so that they may be used clinically to assess change in young children at school and in nurseries.

The Department of Child and Adolescent Psychiatry at the Institute of Psychiatry (A3) is refining a clinical item sheet and developing a computer program to facilitate the extraction of case record material. The intention is to make these methods available to other interested clinics and some of the work is being done in collaboration with the Department of Neuropsychiatry at The Park Hospital, Oxford (development of EEG rating systems).

A quite separate area of methodological concern is that of the classification of psychiatric disorder in children. Up until the past decade this was a barren area - reflected by the allocation of a single all-encompassing coding 'Behaviour Disorders of Childhood' in the eighth version of the International Classification of Diseases (ICD) - with all the concomitant barriers to effective description and communication. Rutter, working with colleagues of the WHO and in the Department of Child Psychiatry at the Institute of Psychiatry initiated proposals for a richer diagnostic scheme which permitted coding of individual cases along a number of different dimensions. This was tested systematically, and as a direct result of that empirical work a revised scheme was adopted for inclusion in the ninth version of the ICD. The Department is currently engaged in examining the properties of the revised version and an associated glossary (A13) in a balanced design experiment involving over 50 child psychiatrists. The experimental design developed for this study will be used in replication studies in other countries. Classification is also the concern of Freud and her co-workers at the Hampstead Clinic, whose scheme makes use of psychoanalytic concepts. Work is in progress to prepare a comprehensive review and guide to the use of the Diagnostic Index and Profile (A13).

Prevalence and natural history of disorder *(see section B)*

The organisation of social and medical services in Great Britain has facilitated epidemiological and follow-up studies. In the field of adult psychiatry, epidemiologists have made extensive use of psychiatric case registers as sampling frames for their research. However, in discussion, workers on all the major British case registers agree that they are of limited use in child psychiatry. This is largely because childhood disorder, regardless of type or severity, is assessed and treated by a variety of both medical and non-medical agencies, and a medically based register will not provide a representative base. A more appropriate base for child research is provided by a 'births register'. There are very few of these and it was a matter of particular regret that the Waltham Forest Births Register, previously used for epidemiological research into childhood disorder, has now been closed.

Prevalence studies in child disorder have been carried out after screening total populations defined geographically or by date of birth. Using these methods, British research has provided a unique body of information on relationships between social, educational and family factors and manifestations of childhood disturbance.

Richman et al. (B6) have used an approach similar to that employed by the survey on the Isle of Wight to study the prevalence of disorder in very young children in an area of outer London. A short-term follow-up will permit the examination of continuities and changes between the ages of 4 and 7. Their sample was identified through the Waltham Forest Births Register. A study by Rutter et al. (B7) extends the earlier Isle of Wight findings to an urban area to examine the possible cause of regional differences in the prevalence of childhood disorder.

The National Child Development Study (NCDS) (1958 cohort, B4) and Child Health and Education in the Seventies (CHES) (1970 cohort, B2) are both very large scale longitudinal studies which have set out to study a national sample of children defined by their date of birth. In both cases the original samples were collected to study factors which contributed to maternal and infant morbidity in the perinatal period. These were then elaborated to provide longitudinal information that would relate demographic variables and early medical and obstetric events to later development. They have been and will also be used cross-sectionally to describe the prevalence of medical disorder and behavioural deviance. By virtue of their size, these studies must depend on self-completed questionnaires and on data obtained by a very large number of interviewers - mainly health visitors - with varying degrees of skill and commitment. The benefits of sample size are inevitably mitigated by the quality of the data. In the case of the NCDS (1958 cohort), the basic measure of behaviour at the ages of 7 and 11 was a score on the Bristol Social Adjustment Guide. This is a questionnaire completed by the teacher and will not reflect disorder confined to home. The external validity of the test has not been systematically evaluated so that analyses which use this measure are difficult to interpret. The most recent follow-up of the 1958 cohort at age 16 expands the behavioural enquiries made with parents and uses externally validated questionnaire measures. The later CHES (1970 cohort, B2) places more emphasis on behaviour, and collects information on problem behaviours at home and at school and on the mental state of the mother, an important factor in determining child disorder.

Longitudinal studies also provide an opportunity to examine the natural history of disorder in childhood. Douglas's (1946) British National Survey (B3) and the 1000 Newcastle Families Survey of Brandon et al. (B1) were large scale longitudinal studies started shortly after the end of World War II. The cohorts were studied at frequent intervals during childhood and adolescence. Douglas remains in contact with 86 per cent of the 1946 sample (now aged 30) and is now relating later psychiatric morbidity to earlier childhood problems and experience (B3). The 1946 cohort is also being used to examine behavioural continuities between and within generations. Subjects who have themselves become parents are being interviewed when their children are aged 4 and 7 (B3). The Newcastle study ceased when the cohort reached the age of 16. Brandon is now undertaking an exercise to examine the feasibility of relocating the sample to study the relationships between early and later disorder. West and Farrington (B10) followed a group of boys from a high delinquency area during middle childhood and later adolescence. During that time behavioural assessments were made at regular intervals. The cohort was further examined at age 21 and 25 and these later assessments will provide information on continuities between childhood disorder and adjustment in early adult life. Zeitlin (B 11) is using case notes from a clinic population to study continuities between child and adult psychiatric disturbance. A very different type of study is being carried out in Mauritius but is being supervised in York by Venables in collaboration with Mednick and Schulsinger (B8). The investigation aims to follow subjects whose patterns of autonomic reactivity are held to resemble those found amongst adult schizophrenic patients, through childhood and adolescence.

General clinical studies *(see section C)*

Studies in this section include those concerned with the definition of diagnostic entities or the investigation of causal mechanisms. Intervention studies are described in section F.

The survey found surprisingly little substantial work being done on the affective disorders in childhood, an area in which there is confusion about both phenomenology and treatment. Berg and Butler (C1) are continuing their investigations into aspects of the psychopathology and background of children who refuse to go to school. Lena (C2) has made interesting proposals to study the children of parents with manic-depressive psychosis but is working with limited resources and inadequate access to control cases. A study by Walker et al. on self-injury (C3) is assessing a consecutive group of 10-14-year-old children who have attempted suicide. Birleson (A1) is working to develop a questionnaire measure of depression appropriate for use with children.

The concept of hyperactivity is an important one for it carries - at least as used in the United States - important implications for treatment and aetiology. There was only one study on this condition - that of Taylor et al. (C6), who are examining the relationship of psychophysiological measures and measures of attention to hyperactivity in a group of disturbed boys. Kolvin and his colleagues (C5) are studying a group of children with anti-social disorder identified at school with a view to examining the classification of this type of disorder. Both of these studies should prove valuable in clarifying existing over-inclusive diagnostic concepts.

There are a number of studies taking place on the syndrome of infantile autism. Previous estimates of the prevalence of autism have been criticised for generalising from alleged over-estimates found in surveys carried out in areas with a disproportionate number of middle class families. In order to examine this possibility Wing and Gould (C19) are carrying out a prevalence survey in a geographically defined area with a predominance of working class families and, in the same study, are investigating the prevalence of autistic-like behaviour in children with severe subnormality.

The aetiology of the condition and the contribution of genetic and biological factors are being studied by Folstein and Rutter (C10), who are examining the concordance for cognitive impairment and for social autism in twins. By simultaneously examining anamnestic data, this study allows for the investigation of the interaction between neurological and genetic factors in the autistic syndrome. Relationships between social and cognitive aspects are also being studied by Wing and Gould (C19) in their total population survey, and, in a separate study (C20), the same workers are examining relationships between social skills and educational achievement. Rutter and Clark (C18) are investigating the relative importance of poor motivation (negativistic behaviour) and cognitive deficit in accounting for autistic children's poor performance during psychometric testing.

The role of environmental factors - in particular disturbances in parent-child communication - in the aetiology of autism is being studied by Lennox and Rutter (C13) who are investigating thought disorder in the parents of autistic children and in controls. The same problem is being examined by Kolvin et al. (C12), who have used a range of self report attitude and behaviour scales to compare the parenting received by autistic children with that of other children with communication disorders. Rutter and Bartak (C17), examining a similar problem, have undertaken a detailed observational and interview comparison between autistic and aphasic children.

Research in the field of developmental disorders is being carried out by Shaffer who is investigating the relationship between bedwetting and psychiatric disorder. In one study, enuretic children with and without associated psychiatric disturbance are compared on a number of background indices and measures of bladder function (C25). In another, behaviour change is being assessed after successful treatment (C24). Berg et al. (C22) are interested in diurnal incontinence and are acquiring normative data on functional bladder volume and on the motor behaviour adopted by daytime enuretics for controlling micturition. Fundudis et al. (C11) are examining the behavioural and scholastic correlates of delay in speech development.

A number of psychologists, namely Bryant and Bradley (C26), Frith (C29), Miles (C31) and Richardson and Zangwill (C32), are studying perceptual and linguistic differences in children who have difficulty in reading. Russell and Slade (C33) are examining the correlation between backwardness in reading and in calculating in a clinic group. Clark (C27) is examining the value of intelligence and language tests in predicting later reading difficulties. Studies on the relationship between purely school or educational factors and learning difficulty may not have been fully represented in this survey, which included only a selected number

of academic departments of education. Relevant studies include those by Fogelman (C28) who is matching NCDS and municipal data to relate regional differences in attainment to educational expenditure, and Wedge and Robinson (C35) who are contrasting the attainment of children who started school before and after their fifth birthday. More detailed and complex school influences on attainment are being examined in the studies by Rutter et al. (H6) and Reynolds et al.(H5), described later in this section. The impact of anxiety on learning at school is being studied by Jones and Currell (C30). Worrall (H8) is studying the effects of open feedback between pupil and teacher on classroom behaviour and achievement

Psychiatric disorder in children with physical illness (see section D)

Selection bias is a major problem in the evaluation of psychiatric disorder in epileptic children. An opportunity to overcome this arose with the NCDS (1958 cohort) from which it was possible to extract a total sample of children with convulsive disorders. Butler and West (D3) have used this to compare educational attainment and social adjustment of children who have had febrile and other seizures. They have examined additional medical records for these children, but behavioural assessment has been limited to data obtained during the NCDS .

The relationship between early neurological dysfunction and later behaviour remains a confused area with most follow-up studies using perinatal abnormality rather than any direct index of neurological dysfunction as their starting point. Drillien and Thompson (D5) have the opportunity to follow up a large representative series of low birth weight children who had documented neurological disorder in the first year of life. Regrettably, the value of this study will be limited by a somewhat restricted follow-up evaluation of behaviour.

Non-localising 'minor' or soft neurological signs and a number of physical 'stigmata' have previously been found to be associated with learning and behaviour difficulties. However, these signs are alleged to be more common in children with a history of perinatal complications and it may be that the apparent association is an artefact of social disadvantage. Shaffer and Sandberg (D14) are examining this possibility by studying the relationship between neurological signs, physical stigmata and social and family disadvantage in a school population.

The search for mechanisms linking brain dysfunction and behaviour disorder has been the focus of a number of studies in the Child Psychiatry Department at the Institute of Psychiatry. In the latest of a series of related investigations Shaffer et al.(D12) are carrying out a controlled follow-up of children who have suffered head injury. Particular emphasis is being given to obtaining a satisfactory baseline of pre-accident behaviour and on examining environmental and rearing changes which might account for the high rate of disorder that has been found to follow brain trauma. In a closely linked study Rutter and Chadwick (D11) are studying the effect of age and cognitive recovery after severe brain injury.

It is probable that at least some of the psychiatric difficulties experienced by epileptic children follow from the unwanted effects of anticonvulsant drugs. This remains a very under-researched area. Corbett (D4) is relating anti-convulsant blood levels in institutionalised severe epileptics to their educational achievement and behaviour. Hutt (D8) at Keele is examining some specific cognitive effects of anticonvulsant and other drugs.

The practical difficulties experienced by children crippled with spina bifida are being examined by Butler et al. (D2), Spain (D15) and Harper et al. (D6). Improvements and refinements in EEG techniques are leading to increasing scepticism about earlier studies which suggested specific behavioural correlates of given electrographic patterns. This area is of interest to Harris et al. (D7) and Shaffer et al. (D13), each of whom is engaged upon referring type of EEG abnormality to psychiatric syndrome in somewhat different clinical populations, and to Stores (D16, D17), who is examining EEG correlates of educational and school adjustment difficulties.

Many clinicians working with epileptic children feel that the high rate of disorder is at least partially attributable to social stigma. Research into attitudes is being carried out by Bower and Ward (D1) and West (D20). But this type of research is extremely difficult and may require a more sophisticated methodology.

Several of the studies on the psychiatric status of physically ill children (section D) imply the changed nature of parent-child interaction. A novel and interesting design is the experimental and observational study by Markova and Forbes (D26), who are investigating overprotective behaviour among the parents of haemophilic children. Wolff and Wills (D30) are carrying out a psychiatric survey of a group of adolescent diabetics previously studied in early childhood. Baum and Gath (D21) are examining the relationship between poor disease control in diabetics and their psychiatric state.

The impact of hospitalisation during early childhood has previously been examined by Douglas using the British National Survey (1946) data. These studies are being extended (D24) to examine possible sources of bias and to investigate whether effects have persisted into later adolescence and early adult life. The effects of medical treatment are also being studied by Standen and Waugh (D29) in an uncontrolled and selected study on children with congenital dislocation of the hip and by Howarth and his colleagues (D25), who are studying behaviour change over a one year period amongst children receiving renal dialysis at home. Several paediatricians are concerned to lessen the stresses imposed by hospitalisation. Evans et al. (F12) are studying the impact on the families of handicapped children of intervention by a special Children's Centre and Smith et al. (D28) are examining the effects of play leaders on ward play activities.

Later effects of obstetric and perinatal abnormality *(see section E)*

Various obstetric and perinatal factors, in particular deficient intra-uterine growth, obstetric analgesia and the quality and amount of early mother-child contact, have been held to influence the child's later social and intellectual development. Several longitudinal studies have been established to examine these effects and some of these are still active. Findings from these studies have often been contradictory, few have taken account of family and social factors which themselves predispose to perinatal and intra-uterine abnormality and which may, long after birth, continue to operate to the child's detriment. Illsley et al. (E5) are concerned with this issue and are investigating the early social as well as clinical experiences of low birth weight infants.

To some extent these problems can be examined in the major longitudinal studies, namely the NCDS 1958 cohort (B4) and the CHES 1970 cohort (B2), where large numbers allow for the statistical partialling out of interrelated effects. Infants of low birth weight in the CHES sample (B2) will have been examined on a number of developmental measures at 22 and 42 months (Chamberlain et al., E1). Although there was little emphasis on behaviour at the time of these examinations, the data will be linked to the richer social and behavioural assessment at the age of 5.

In preparing this survey, no routine enquiries were made with academic departments of obstetrics, and it is likely that several of these are following up children with reference to antenatal or perinatal features.

From the paediatric departments surveyed Dobbing and Whitfield (E3) at the University of Manchester, and Stewart and Strang (E10) at University College Hospital, London (UCH) are concerned to assess the later effects of intra-uterine and perinatal disorder and treatment. The Manchester unit collates very complete social and ultrasonic fetal growth data during pregnancy. The UCH unit provides continuous automated records of the treatment and state of ill neonates in an intensive care unit. The programme has been ongoing for some time, but lays most emphasis on regular psychometric evaluation with relatively little enquiry into behaviour or social and family factors. The follow-up programme at Manchester has not yet been established.

The British Births Survey showed that an increasing proportion of newborn infants are spending time in special care units. The effects of the separation from mother which may accompany intensive care are of concern to a number of developmental psychologists and paediatricians. Pilot work is being carried out by Harvey et al. (E4) and Richards and Brimblecombe (E9) in noting the amount of contact that mothers have with their infants receiving special care. Jaques et al. (E6) are contrasting the development of children treated in units in which contact with mother was maximised with infants who received conventional care.

Studies of this sort are clearly of interest and may well reveal effects of early separation on parenting. However, it is by no means certain which

measures might be sensitive to effects on the infant's social development. Hence the value of Mills' study (E8) into the effects of obstetric analgesia. This employs a very wide range of outcome measures to investigate the short or medium term effects on the infant of obstetric analgesia.

Treatment studies *(see section F)*

Little psychopharmacological research was being carried out at the time of this study. Graham and Richman's study on sleep disorders (F1) is examining the hypnotic rather than the psychotropic effects of drugs in a mixed group of children with sleep disorders. The study by Kolvin et al. (F2) on anti-depressant treatment of school phobia is a much needed replication of the work of Klein et al. in the United States, but suffers from the absence of checks on drug consumption with a drug which has been shown to have a low acceptance rate in children. There is no work being undertaken on the use of stimulant drugs. Shaffer et al. (F3) are carrying out laboratory studies into the effects of imipramine on bladder function.

Behaviour therapy research includes the use of imaginal desensitisation in asthmatic children (Norrish and Godfrey, F19) and Jehu et al. (F15) are studying the value of behavioural treatment of children in the care of social services.

With the high prevalence of psychiatric disorder in childhood and the shortage of skilled practitioners, it is understandable that there should be an interest in developing treatment techniques for use by non-specialists. Pinkerton (F21) is engaged in training nurses to counsel families, but has not yet developed a satisfactory evaluation programme. Coleman et al. (F11) are training nursery nurses in behaviour management. Rutter et al. (F22) are assessing the effects of working through parents to manage behaviour problems of autistic children. Yule et al. (F26) are carefully evaluating behaviour therapy administered through teachers and this is also part of the ambitious treatment study, being carried out by Kolvin (F16), which contrasts the value of a variety of school based interventions. Not all treatment studies examine the treatment interactions that actually take place rather than those which are merely intended. Careful documentation of the therapeutic process is especially important in studies of psychotherapy and it is regrettable that neither Lask (F17), nor Lindsay (F18) nor Cameron (F10) plans to examine the nature of the treatment interaction in his psychotherapeutic studies.

Ounsted and Lynch (F20) are attempting to prevent child abuse by using intensive nurture and support in 'at risk' families. However, this is of necessity a small scale study and its impact will be difficult to assess. A more systematic approach to prevention is being applied by Tizard et al. (F23) who are painstakingly examining the impact on mental and physical health of comprehensive children's centres set up to serve defined geographical areas.

Development of children with family and social disadvantage *(see section G)*

A number of studies investigate the concept of 'the cycle of deprivation'. Rutter and Quinton (G11) are enquiring into the childhood experiences of a consecutive group of mothers who are placing their own children into care. They will then go on to investigate a now adult population, whose childhood deprivations had been clearly documented in an earlier study of children in institutions. This study provides an example of how a well-defined problem which requires longitudinal study can be researched economically by using data obtained in a previous investigation. Tonge and Lunn (G16) will also capitalise on an earlier study by examining the second and third generation of a group of deprived families, who were the subject of earlier research.

An alternative approach is to investigate the second generation of the cohort in a longitudinal study. Brandon et al. (B1) would be interested in doing this, and are undertaking a feasibility exercise to determine how readily the original 1000 Newcastle Families' cohort can be traced. The principal aim of the British National Survey's (1976 cohort) Second Generation Study (B9) is to examine continuities of disorder in different generations. The limitations of the origin sample - which, for example, excluded illegitimate births - would make it a less suitable base for the study of continuities of deprivation.

McLaughlin et al. (G8) use an interesting strategy to examine inter-generational continuities of parenting. They examine similarities in the parenting behaviours of sibling sisters brought up by the same mother.

These investigations address themselves to the basic question of whether there are continuities of deprivation. A study by Wolkind et al. (G17) examines how such continuities might be mediated. Carefully constituted samples of disadvantaged women and controls are being studied during the early years of their first child's development. This study, as well as any in this review, illustrates the advantages of collaboration between the psychiatrist and the behavioural scientist. It combines the psychiatrist's awareness and concern for individual differences and clinical problems with methods derived from developmental and ethological research. Another study which examines mechanisms of disadvantage is that by Mayall and Petrie (G7), contrasting the social behaviour of minded children when with their baby minder and when with their mother. The effects of deprivation on the child are being investigated by Dixon and Rutter (G3) who are examining classroom behaviour of children who have been institutionalised since an early age.

There is a close link between parental psychopathology and childhood disorder. The studies of Brown and Harris (G1) and Rutter et al. (G12) are in some respects complementary. Brown is using epidemiological methods to examine the vulnerability to and precipitation of depressive disorder in women. Rutter et al. have been investigating the impact of depressive and other mental disturbance in parents on their children. Another investigation examining maternal influences is that by Gath (G4) who, in earlier research, noted the particular difficulties experienced by older mothers. Her current controlled study examines these problems systematically and also looks at their impact on the behaviour of the child.

A number of investigators examine relationships between child state and changes in family circumstance. Tizard and Hodges (G15) are examining variations in the social development of children - all initially in institutional care, but differing in their later nurture. Streather (G14) is using longitudinal data from the NCDS to contrast the development of children who start life with a single parent but whose mothers then marry or cohabit, with children born legitimately, who go on to lose a parent by death or separation. Pollock (G9) is following a cohort of children in a disadvantaged urban community with particular reference to changes in housing and material circumstance.

School influences on behaviour *(see section H)*

The survey of academic departments of education was limited to those with chairs in psychology. For this reason certain relevant projects may have been overlooked.

Several studies examine the contribution that school may make to childhood distress or disorder. Pinkerton and Hughes (H4) are examining the emotional impact of part-time nursery education, which, whilst appearing to provide educational benefits in an economical way, necessarily involves disruption of routine and discontinuity of care for the very young child. These workers are also examining the prevalence of problem behaviours during the first few weeks at school (H3) and their relationship to early care and other background variables. In a further study they are contrasting the quality of communication between very young children and their teachers and mothers (H7).

Both Rutter et al. (H6) and Reynolds et al. (H5) are examining the effects of secondary school on the behaviour of older children. An earlier study by Power suggested that long recognised school differences in the prevalence of disturbed or delinquent behaviour could not be explained solely by variations in their pupil intake. This was later confirmed by Rutter in a longitudinal study in which it was possible to take account of difference in intake. Both Reynolds and Rutter are now contrasting the social organisation, curricula, teaching methods and amount of pastoral care in schools with high and low rates of disorder.

In an elegant series of experiments, Connolly and Smith (H2) have studied the effects of class size and density and teaching style on the behaviour of young children. This is likely to provide useful information for the planning and organisation of schools and also to be of more general relevance to the study

of ecological influences on children's social development. Worral (H8) is studying the process whereby children and teachers form initial impressions of each other. As part of this research it is proposed to examine the effects on pupil attitudes and behaviour of impression feedback. This issue is directly relevant to certain psychotherapeutic methods.

Finally, Butler et al. (H1) in their extensive survey of school and care provisions for young children linked to the assessment of individual children in CHES (B2) will hopefully provide information on the impact of different types of provision for deprived or handicapped children, and more generally on the child population.

Personality and individual differences *(see section I)*

The stability of individual differences over relatively short periods of time is being examined in the longitudinal studies being carried out by Richman et al. (B6), Costello (J3), Wolkind and Hall (G17), Richards and Dunn (J16) and Blurton Jones (J1). Wood (I5) is studying the stability of activity and attention during the first 10 months of life. These are attributes which are thought to be relevant to some forms of behaviour disorder in childhood and their early correlation and continuity will therefore be of particular interest to child psychiatrists. Powell (I4) is examining the association between Eysenckian parameters of personality and behaviour disturbance. Little (I3) is contrasting certain psychophysiological responses in children with predominantly conduct and neurotic disturbances.

Long-term stability is being examined in the Institute of Education's longitudinal study which was established primarily to examine the stability of personality traits. Data collection has been complete for some time and Giuganino and Hindley (I1) are now analysing scores on the Cattell Inventory collected during adolescence. Venables (B8) is examining the consistency of autonomic variables during childhood as part of his study of risk factors in schizophrenia. Kolvin and Scott (I2) have acquired data on temperamental characteristics of monozygotic and dizygotic twins during childhood and early adolescence and analysis should be valuable in assessing the genetic contribution to individual differences.

Development of communication and social relationships within the family *(see section J)*

Blurton Jones is using adaptations of Ainsworth's techniques for measuring attachment to carry out a longitudinal study of relationship formation in middle class children (J1). The special contribution of his study has been the duration and frequency of follow-up and the attention paid to individual differences in the child and mother. This method is now being extended to a working-class group and to mother-infant pairs in other countries.

The notion of attachment has traditionally been linked with response to separation. Hinde's work with primates has suggested that the infant's response to separation is to a large extent determined by the quality of its prior attachments. Dunn (J5), now working in Hinde's laboratory, is examining an extension of this proposition in human infants. Toddlers' responses to the stress imposed by the birth of a younger sibling are being related to measures of attachment obtained before the second child's birth. Sturge (J19) is examining a similar situation, the emphasis in her study being on the temperamental and behavioural characteristics of the first born child. Although these studies are being carried out at different centres there has been a good deal of early cooperation so that each will provide limited replication data for the other.

There is a great deal of interest in the ways in which attachments or relationships are formed in the young infant. The methods of study owe a great deal to ethology and to recent linguistic research with its emphasis on the microanalysis of sequences. In nearly all cases, interactions in a standardised, sometimes artificial, sometimes semi-naturalistic situation are filmed or videotaped and the recording is then analysed. Sequences generate a great deal of data which may be cumbersome to handle. Yet this approach to child development research is clearly attractive and in initial execution perhaps simple. In preparing this survey, one encountered a number of such projects being undertaken for masters and doctorate theses. Many of these appeared to over-simplify the

issues, paying little heed to individual differences in mother or infant and minimising the likely problems of data reduction and analysis. Studies of that sort have not been included in this review. However, Bruner (J2) in Oxford, Newson and Pawlby (J15) in Nottingham and Schaffer and Crook (J17) and Schaffer and Messer (J18) at Strathclyde University use these techniques with a major investment of resource to look at how mother and infant become engaged in an interaction and how the needs and intentions of each are communicated to one another. Bruner is particularly interested in whether these pre-linguistic communications are continuous with linguistic structures which appear later. Newson is interested in the role of intent in infant behaviour and the workers in Strathclyde in the very detailed identification and analysis of subtle communicative signals between mother and young child. Foss and Wells (J6) are examining a rather more specialised aspect of early communication and are interested in the process of imitation between mother and infant.

It is likely that the degree of sophistication and complexity of early communication is linked to the stage of the infant's perceptual development. Ingenious studies by Mills (J11) at Bedford College and Murray (J13) in Edinburgh set out to identify the developmental stages of the infant's visual and auditory discrimination. Mills uses an operant technique and Murray a general disturbance in the infant's behaviour as markers of infant recognition. These responses are noted at different ages with reference to minor alterations of the mother's appearance, voice and behaviour.

It is now generally acknowledged that the infant's behaviour may initiate interactions with its caretaker and determine their length and nature. The infant role in a relationship is a subject of wide interest. However, because there are many factors operating in a relationship, it is experimentally difficult to identify those which originate with the infant. Contrasting a mother's behaviour with her different children is one approach but is contaminated by birth order effects. This has led Costello to use twin pairs in his longitudinal study of relationship formation (J3). Another approach to the study of infant effects is to look at children with known abnormality and to note how these affect the mother's behaviour. Newson et al. (J14) and Newson and Pawlby (J15) are using deaf and Down's syndrome children to look at compensatory or alternative behaviours in the mother.

Perhaps it is not surprising in a field that is very child centred that, whilst a great deal of attention is paid to variation in infant state and temperament, there is apparently less interest in the effects of fluctuations or differences in the mother's state. However, in view of the high prevalence of mood disturbance in the mothers of young children it would presumably be an added strength to many infant studies if the mother's state were to be systematically noted. Two modest studies examine maternal stress. Geber (J7) contrasts maternal control techniques with and without a time stress and Mills et al. (J12) examine mothers' psychophysiological responses to infant crying.

Bruner (J2) is interested in the relationship between early prelinguistic communicative behaviours and later linguistic cognitive development. This is also being examined in Richards and Dunn's Cambridge Longitudinal Study (J16) in which 77 mother-infant pairs have been examined from pregnancy until the age of 5½. During this study Dunn noted that parent participation greatly increased the child's persistence in play. This finding is being pursued (J4) with reference to social class, for it may be that play provides a useful rehearsal for skills and behaviours that will be valuable at school. Social class differences in child rearing practices have been the focus for a longitudinal study by Newson et al. in Nottingham (J14). Their cohort, now aged 16, is being examined for the last time during childhood in 1976. For a variety of reasons, data have so far been presented in a primarily cross-sectional way. Use of the SSRC data bank will make it easier to examine longitudinal continuities in the future. The examination at age 16 will include an interview with the child on attitudes and activities. Instruments devised for this study have been translated and are also being used (J14a and J14b) to study child rearing in groups of immigrant families.

Development of extra-familial relationships: attitude and role-taking formation *(see section K)*

This section covers a mixed group of studies which have in common the child's behaviour in and attitudes towards the world outside his immediate family. It excludes studies which focus on the specific influence of school (see section H).

Manning et al. (K11) in Edinburgh have completed a small but original observational study on patterns of aggressive behaviour amongst 4-7-year-old children which they plan to replicate on a larger sample. This was the only experimental study of aggression in young children encountered in this survey.

Similarities between social behaviour within and away from the family are being examined by Blatchford and McGurk (K2) who are studying social approaches that very young children make towards each other, and by Fluck and Phillips (K5), who are interested in the effect that experience with siblings has on children's social skills. Martlew (K12) is examining continuities between speech fluency at home before starting school and later use of language in class.

Methods for gauging empathy in younger children are necessarily difficult and would seem to require a great deal of preliminary methodological work. Light and Antonis (K8) use games developed by Flavell to study the development of role-taking and its relationship to cognitive development. Hoy (K6) uses a more direct approach to study a similar problem and observes children performing a task which requires some degree of empathic communication.

Attitudinal research is beset with methodological problems and research on the Eysenck Personality Inventory suggests that these increase through childhood and adolescence. Nethertheless, children's attitudes to their careers, sex etc. are being sought in both the Nottingham Longitudinal Study (J14) and the National Child Development Survey, 1958 cohort, (B4), with examinations at age 16. Jahoda (K7) is enquiring into pubertal children's attitudes towards alcohol and Davey and Pushkin (K4) into children's attitudes towards other racial groups. These workers are using a number of different techniques to enquire into attitudes and the researches should be of interest from a methodological point of view.

Finally, Louden (K9) is examining the self-esteem of minority group adolescents and is relating this to the racial composition of their school.

3. Research Abstracts

A – Methodological studies

(a) Abnormal

A1 Birleson, P. *(Department of Psychiatry, University of Edinburgh)* DEPRESSION IN CHILDHOOD

The aim of this study is to devise a reliable questionnaire for use with children which will provide a measure of depression validated against clinical assessments. The first stage has been to examine test-retest reliabilities of children's self-ratings on a list of symptoms thought to be indicative of depression in a group of children resident in maladjusted schools. The second stage will be to give the questionnaire to clinic attenders who have been assessed by child psychiatrists for the presence or absence of depression and for whom information is available about onset and precipitants of current disturbance, family history of depression, suicidal behaviour and alcoholism.

A2 Brown, G.W., Kevlin, M., and O'Connor, P. *(Social Research Unit, Bedford College, University of London)* DEVELOPMENT OF MEASURES OF MARRIED WOMEN'S CURRENT LIFE STYLE AND SUBJECTIVE EXPERIENCES

The work of this Unit in studying vulnerability to depression has been based on interview techniques developed earlier by Brown and Rutter. These have been widely used in child psychiatric research in Great Britain and abroad over the past decade. The technique consists of an interview in which a large number of areas are covered, with open-ended exploration of any particular topic continuing until enough information has been collected to make a rating. The principal methodological problem consists in devising reliable rating scales to deal with the richness of the interview material.

The Unit is currently engaged in developing scales for rating a woman's subjective feelings of self-worth, control, commitment and competence in her domestic roles and for rating various dimensions of the marital relationship, in particular measures of emotional and practical support and the contribution that a woman's husband makes to her feelings of self-worth. Similar measures are being developed on the extent, quality and meaning of extra-familial relationships, contacts and activities.

The methodological process involves the construction, modification and revision of measures following lengthy interviews and the provision of detailed notes and anchoring examples for each rating scale.

The work is being supported by an MRC project grant.

A3 Chadwick, O., Shaffer, D., Rutter, M., Harris, R. and Stores, G. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry and Maudsley Hospital, London and Department of Neurophysiology, Park Hospital, Oxford)* DEVELOPMENT OF ITEM SHEETS AND RETRIEVAL SYSTEM FOR CLINICAL CASE MATERIAL

Item sheets have been used at the Maudsley Hospital for many years to code diagnoses and other clinical features of case material. They have facilitated a number of case note studies. The present project entails the refinement of item sheets to increase their acceptability to clinical personnel - and hence their reliability - as well as the development of a computerised filing and retrieval system, which allows for the later attachment of investigative and follow-up information. The EEG item sheet is being developed jointly with Stores at Oxford and will enable clinical material from both centres to be pooled for further research.

A4 Cox, A., Rutter, M., Hopkinson, K., and Egert, S. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* INTERVIEWING STYLES IN DIAGNOSTIC INTERVIEWS WITH PARENTS

Semistructured interviews have been widely used in research done at the Institute of Psychiatry, and inter-rater reliability has been shown to be consistently high. However, a pilot exercise by Cox suggested that different interviewing techniques might have different effects and elicit different sorts of informant responses. The present investigation was planned to identify the advantages and disadvantages of various good interviewing techniques.

The study is in three parts. The first involved the development of systematic and reliable measures of interviewer techniques, informant responses and sequences of interviewer-informant interaction. The second consisted of a naturalistic videotape study of initial assessment interviews of parents attending a child psychiatric clinic undertaken by psychiatrists in training. The findings showed that certain techniques were significantly associated with fuller expression of emotions and feelings by the informants, while other techniques were associated with a better range and depth of factual information.

The third stage consists of an experimental study in which four main techniques are being used in order to systematically examine their effects in a controlled fashion. Each informant will be interviewed on two occasions by different interviewers using different techniques in a balanced cross-over design.

The study is supported by the SSRC.

A5 Freud, A., Hayman, A., Sandler, J., and Yorke, C. *(Hampstead Clinic, London)* PREPARATION OF A MANUAL FOR THE RESEARCH AND SERVICE USES OF THE HAMPSTEAD DIAGNOSTIC INDEX AND PROFILE

The Hampstead Diagnostic Index is a classification system that has been devised over the past 15 years to code both surface symptoms and underlying psychopathological formations that become manifest during the course of psychoanalytical treatment. Its development has been done in conjunction with work done at the Clinic on the refinement and definition of psychoanalytical concepts.

The Diagnostic Profile is a classification system for individual patients which aims to provide psychoanalysts with a basis for comparing case material and for the development of methods for predicting likely outcome and response to treatment.

The workers at the Hampstead Clinic are now collating a manual to serve as a guide to the use of the Index and Profile.

This study is being supported by the United States National Institute of Mental Health.

A6 Ghodsian, M. *(National Children's Bureau, London)* THE INTERNAL CHARACTERISTICS OF THE BRISTOL SOCIAL ADJUSTMENT GUIDE (BSAG)

The BSAG has been widely used in survey work; in some cases as a predictive instrument, in other cases as an index of maladjustment. The Guide was used in the National Child Development Study (1958 cohort) at age 7 and 11. The present study examines those data and includes a factor analysis of all items, a number of cross-reference exercises with the BSAG and the Rutter A and B scales, and validation exercises relating scores to delinquency and psychiatric referral.

This study is being supported by the DES and DHSS.

A7 Heim, A., Unwin; S., and Watts,K. *(Cambridge Psychological Laboratory, University of Cambridge)* THE BROOK REACTION TEST IN MALADJUSTED AND DELINQUENT ADOLESCENTS

The Brook Reaction Test is a word-association test in which the stimulus words are ambiguous. It has been used to examine the personal interests of older children and adolescents. Certain deviant forms of responses had been noted previously in psychiatrically disturbed adolescents. The current study

comprises a comparison of responses in delinquent, psychiatrically disturbed and normal teenagers, matched for IQ.

The study is supported by the MRC.

A8 Kolvin, I., Garside, R.F., Nicol, A.R., Leitch, I., and McMillan, A. *(Nuffield Child Psychology and Psychiatry Department, Newcastle upon Tyne)* A COMPARISON OF DIFFERENT METHODS FOR SCREENING CHILD DISORDER

The aim of this investigation is to compare the identification rates of different screening measures used in a school population. The study is being carried out in conjunction with an investigation of different forms of school based treatment (see F16).

Approximately 500 7-8-year-old children were screened using the Rutter B scale, a group test of educational achievement and sociometric measures of peer acceptance and rejection, and by examination of their school attendance record. Direct interviews were held with a sub-sample of these children and their parents. It is proposed to examine the extent to which these measures overlap and to calibrate their validity with reference to the direct interviews.

The study is supported by the DES.

A9 McMillan, A., Kolvin, I., Garside, R.F., and Walker, L. *(Nuffield Child Psychology and Psychiatry Department, Newcastle upon Tyne)* DEVELOPMENT OF SOCIOMETRIC TECHNIQUES FOR THE IDENTIFICATION OF ISOLATED AND REJECTED CHILDREN

The aims of this exercise are to contrast different sociometric techniques and to validate them against other measures of child disorder. Approximately 500 8-year-old and 500 12-year-old children have participated in the study. The techniques used have been a 'Companionship Choice' measure, and a technique which requires the child to fit a known peer to a pictorial stereotype ('Guess Who'). Children's scores on these measures are being cross-referenced with their scores on the Rutter and Deveraux Teachers' Questionnaires, the McFarlane Honzik Parents' Questionnaire measures and the Junior Eysenck Personality Inventory. The study is supported by the DES.

A10 Mitchell, W., and Coleman, J. *(Department of Psychiatry, London Hospital Medical School)* DEVELOPMENT OF OBSERVATIONAL TECHNIQUES TO INVESTIGATE THE EFFICACY OF TREATMENT IN DISORDERS IN PRE-SCHOOL CHILDREN

The aim of this study is to develop a standardised assessment technique, based on a direct observation method, which could be applied to young children in a school or nursery setting. The instrument would be used to measure short-term change within the same setting after intervention.

The instrument consists of a range of observed behaviours coded at 20-second intervals. Assessments are being made, by testers with differing degrees of experience, of its applicability and stability across different settings and its validity through reference to teachers' global ratings of behaviour.

A11 Rutter, M., and Chadwick, O. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* EVALUATION OF A MALAISE INVENTORY

The 'Malaise Inventory' is a 24-item self-completed questionnaire derived from the Cornell Medical Index. It has been utilised in a number of child and family studies to identify emotional disturbance in parents and in adolescents.

The present exercise is concerned with compiling validation and reliability data from studies within the Department of Child and Adolescent Psychiatry.

A12 Rutter, M., Chadwick, O., and Yule, W. *(Department of Child and Adolescent Psychiatry, and Department of Psychology, Institute of Psychiatry, London)* PREPARATION OF MANUAL FOR THE RUTTER 'B2' SCALE

The 'B2' scale is a 26-item teacher questionnaire on children's behaviour which is now extensively used for screening purposes. Means, frequency distributions

and individual item prevalence rates have been established from longitudinal and cross-sectional samples of 10- and 14-year-olds on the Isle of Wight, and for 7-, 10- and 14-year-olds from an inner London borough. Data on the scale's reliability and validity, together with correlations of overall scores with non-verbal IQ, reading age and social class, are being collated.

A13 Rutter, M., Shaffer, D., Shepherd, M., and Sturge, C. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry)* EVALUATION OF A MULTIAXIAL CLASSIFICATION SCHEME AND GLOSSARY FOR CHILD PSYCHIATRIC DISORDER

An earlier exercise carried out at the Institute of Psychiatry compared the reliability and discriminating properties of the eighth version of the International Classification of Diseases with a multiaxial scheme which incorporated a number of new codings appropriate to child psychiatric disorder. As a result of that study a number of innovations were put forward to the ICD and these have to a great extent been accepted by the WHO for inclusion in the ninth version of the ICD.

The present study involves a systematic evaluation of the psychiatric section of the ICD and of a glossary especially prepared for use with that section. The inter-rater reliability and discriminating powers of the new scheme are being examined by means of case history exercises in which approximately 70 British child psychiatrists are taking part. The value of a glossary is being systematically examined in a balanced design which compares the reliability of diagnosis before and after use of the glossary.

This study is being supported by the WHO.

(b) Normal

A14 Blurton-Jones, N. *(Department of Growth and Development, Institute of Child Health, London).* INVESTIGATION INTO METHODOLOGICAL PROBLEMS OF HUMAN OBSERVATION STUDIES

Blurton-Jones is involved in a number of observational studies of mother-child behaviour (see J1). As part of that programme experiments have been designed: (a) to assess the influence of instructions and of certain situational variables on observed behaviour; (b) to compare the reliability of film, videotape and 'live' direct observation; (c) to compare detailed operational descriptions of behaviour with intuitive interpretations of interactions; and (d) to develop a simplified observational system for clinical use.

The project is being supported by the SSRC.

A15 Coleman, J., Laishley, J., and Pond, D. *(Department of Psychiatry, London Hospital Medical School).* DEVELOPMENT OF AN INSTRUMENT TO MEASURE ATTITUDES OF CHILDREN'S CARETAKING

Work is in progress to develop a semantic differential test of attitudes towards child care. It is hoped that the instrument will be of value in contrasting types of professional child caretaker and in measuring change brought about by caretaker counselling.

The study is being supported by a grant from the Goldsmiths' Company.

A16 Douglas, J., Costello, A., and Hoare, N. *(MRC Unit for the Study of Environmental Factors in Mental and Physical Illness, London)* DEVELOPMENT OF INSTRUMENTATION FOR THE MEASUREMENT OF CERTAIN INFANT AND MOTHER-INFANT BEHAVIOURS

For Costello's twin study (see J3) interviews and mothers' diaries were used to obtain indications of the timing of infant wakefulness and of the amount of physical contact between mother and infant. These measures cannot easily be validated by observation, and the following instruments have been devised which are being cross-referenced against the mothers' reports.
(a) A device to record the times and amplitude of whole body activity. A detector coil is placed under the infant's mattress. Activity produces a change

in the resonant frequency of an oscillatory circuit and allows a recording to be made of both amplitude and times of activity and respiration.
(b) A device to record the mother's proximity to her infant. This consists of a receiver mounted near the infant which is used in conjunction with a transmitter worn by the mother.
(c) A sound analyser extracts the dominant frequency of a cry which can be used to distinguish a cry from adult speech and background noise.

A17 Dunn, J., and Wooding, C. *(MRC Unit on the Development and Integration of Behaviour, Madingley, Cambridge).* VALIDITY AND STABILITY OF THE CAREY SCALE OF TEMPERAMENTAL CHARACTERISTICS

This investigation is being undertaken in the context of a study on the effect on first-born children of the arrival of a sibling (see J5). The Carey Scale of Temperamental Characteristics is widely used to examine individual differences in young children. In this study the stability over time of a shortened version of the Scale is being examined on children included in Dunn's study on children's responses to the birth of a sibling (see J5). Scale scores are being evaluated with reference to home observations.

A18 Hinde, R.A., Roper, R., and Hinde, J. *(MRC Unit on the Development and Integration of Behaviour, Madingley, Cambridge)* PEER-PEER RELATIONSHIPS IN 3-4½-YEAR-OLDS

This is a pilot study aimed at devising a method for describing the quality, content and stability of relationships between nursery school children. Observations are carried out daily in a local nursery class. In due course it is hoped to relate these data to observations on relationships within the families of a sub-sample of children.

A19 Hindley, C., and Medjuck, B. *(Department of Child Development and Educational Psychology, Institute of Education, University of London)* THE STABILITY OF MEASURES OF PERSONALITY IN ADOLESCENCE

The study utilises data from the Cattel Inventory obtained at ages 15 and 18 during the course of the Institute of Education's longitudinal study (see I1).

The study has been funded by the SSRC.

B – Prevalence and natural history of disorder

B1 Brandon, S., Miller, F., and Kolvin, I. *(Department of Psychiatry, University of Leicester and University of Newcastle)* A FEASIBILITY STUDY INTO THE FURTHER FOLLOW-UP OF THE NEWCASTLE 1000 FAMILIES SURVEY

The Newcastle cohort of children born in 1947 was studied annually until the age of 16. A feasibility study is being undertaken to investigate the proportion of the cohort that can now be traced. If it is feasible, Brandon would hope to investigate relationships between early childhood deprivation and maladjustment and later psychiatric disturbance and parenting difficulties.

The research group additionally proposes to undertake a feasibility study of research into the transmission of deprivation (three generations). Assuming the co-operation of a sufficient number of families, the transmission of indices of deprivation could be traced from the parents of the propositi to the propositi, first as children and secondly as adults and then to their own children. An attempt might be made to evolve an index of deprivation using social, intellectual emotional, physical and economic criteria.

B2 Butler, N., Dowling, S., Howlett, B., and Osborne, A. *(Department of Child Health, University of Bristol)* CHILD HEALTH AND EDUCATION IN THE SEVENTIES (CHES)

This is a follow-up study of a national sample of approximately 15 000 children born during a week in April 1970. This cohort was the subject of the British Births Survey (Chamberlain and Chamberlain) and a sub-sample was included in the British Births Child Survey (Chamberlain et al., E1) Children born in Northern Ireland have been excluded from the follow-up study.

The declared aims of CHES are: (a) to examine the development of children identified in the British Births Survey as being at risk because of adverse birth or obstetric factors; and (b) to survey the use made of child health, care and educational facilities during the first five years of life. However, because of the nature of the sample and of the data being collected, it is likely to act as an important reference point for a wide variety of other studies, of both educational and psychiatric interest.

Although resembling the earlier British National Survey (1946 cohort) and the National Child Development Survey (1958 cohort) in scope and size, it differs in emphasis and in the instruments used from the previous investigations. The British Births Study gave special attention to the state of the infant after birth and to the nature and extent of infant-mother contact. The current study (cohort aged 5) investigates the children *before* they start infant school, and includes a study of contemporary developmental and health data from health visitors, child health, and child welfare records and a direct study of the pre-school facilities used by the children. It is using a number of previously standardised and validated instruments to investigate both the mother's and child's psychological state.

Data have been collected by health visitors, the majority of whom have attended briefing sessions. The interview with the mother was piloted on a sub-sample of 1000 children living in the South-West and in Glamorgan, and certain of the novel assessment instruments have been subject to test-retest exercises.

The measures used are listed below in outline detail.

(a) Interview with mothers - includes sections on (i) family composition; (ii) the child's medical history and present health; (iii) television and reading practices; (iv) nursery, playgroup and school experience; (v) education and occupation of parents; (vi) questions about living conditions and social environment; and (vii) family health and smoking habits.

(b) Abstracts of other health records (see above) - cover (i) the extent, nature and times of health contacts and screening procedures; and (ii) whether or not the child has ever been placed on an at-risk or handicapped register or has been suspected as suffering from a non-accidental injury.

(c) Questionnaire for completion by mothers - comprises (i) the Rutter Child's Behaviour Questionnaire; (ii) the Mother's 'Malaise Inventory'; and (iii) a set of attitudinal questions mainly relating to child rearing practices which has been completed especially for the survey.

(d) Tests administered to the child - (i) English Picture Vocabulary Test; (ii) Graded Word Reading Test (Schonell); (iii) Profile Test (Kalverboer); (iv) Copying Designs Test; (v) Draw-a-Man Test.

(e) Physical examination - child's height and head circumference.

The investigation is being funded by the MRC, The National Birthday Trust Fund and the Readers' Digest Association.

See also:

E1 Chamberlain, Davey and Simpson - The British Births Child Study
H1 Butler et al. - A national survey of British pre-school and day care provision.

B3 Douglas, J., and Wadsworth, M. *(MRC Unit for the Study of Environmental Factors in Mental and Physical Illness, London)* BRITISH NATIONAL SURVEY (1946 Cohort)

The Unit is involved in collection and analysis of data from the original 1946 weighted (for social class) cohort of 5362 single, legitimate births. During childhood, information was obtained on the cohort at 2-yearly intervals. This included items concerning behaviour, school adjustment, hospital admissions, court appearances, etc., and 86 per cent of the sample, now aged 30, remain known to the Unit. A number of studies are now being undertaken in the Unit, of which the following are of direct relevance to child psychiatry:

(a) Later Psychiatric Disorder and Its Relationship to Childhood Stress and Disorder (Mann, S., Douglas, J., and Wadsworth, M.)

Individuals in the 1946 cohort were interviewed at the age of 26 and details were obtained about specialist treatment of psychiatric disorder. Psychiatric diagnosis was obtained directly from hospital notes. The data are now being used to examine the relationship between early stress and disturbance and later psychiatric illness which necessitated hospital admission.

(b) Early Predictors of Later Delinquency (Wadsworth, M.)

This is an examination of the antecedents of convicted members of the cohort. Wadsworth is interested in contrasting convictions in terms of their frequency and degree of social acceptability.

(c) Second Generation Study (see B9).

B4 Kellmer Pringle, M., Wedge, P., and Fogelman, K. *(National Children's Bureau, London)* NATIONAL CHILD DEVELOPMENT STUDY (1958 cohort)

The NCDS (1958) had its origin in the 1958 British Perinatal Mortality Survey which was designed to investigate factors in the perinatal period which might have a bearing upon the early death or abnormality of the baby. The sample comprised all of the babies born in England, Scotland and Wales during a week in March, 1958 (17 518 subjects).

The cohort has since been followed up on three occasions, in 1965, 1969 and most recently in 1974.

(a) In 1965, when the cohort was aged 7, 92 per cent of known survivors were contacted. Information was obtained from each child's school and this included a teacher's assessment on the Bristol Social Adjustment Guide.

performance on the Southgate Reading Test, a copying design, a draw-a-man and a problem arithmetic test. Parents were interviewed by health visitors and provided social and demographic information, history of separations, pre-school care, medical history and reports of behaviour. A medical examination was carried out by local authority doctors.

The study was funded by the DES.

(b) In 1969, when the cohort was aged 11, 95 per cent of the original cohort were traced. School data were broadly similar to those obtained at age 7, with the addition of a questionnaire completed by the child concerning his or her interests and aspirations. The parental questionnaire also resembled that given at age 7, with additional information being obtained on social circumstances. The medical examination was unchanged.

The study was funded by the SSRC.

(c) In 1974, when the cohort was aged 16, approximately 87 per cent of the original cohort participated in the follow-up. The information included a reading and mathematics test, a questionnaire completed by the teacher, incorporating the Rutter Classroom Behaviour Inventory and items concerning parental involvement in school activities, overall evaluation of personality and contact with social and therapeutic agencies. A questionnaire completed by the children enquired about attitudes to school, work, marriage and leisure activities, tobacco and alcohol. The parents' questionnaire included questions on disagreements between parent and adolescent, the Rutter Parent Behaviour Questionnaire, and a medical history.

This follow-up is being supported by the DES and DHSS.

Data analysis on the 11-year-old group is continuing with projects which include:

A6 Ghodsian - The internal characteristics of the Bristol Social Adjustment Guide
C7 Calnan - Children with speech problems
C28 Fogelman - Age of starting school and attainment and adjustment
C35 Wedge and Robinson - Study of regional differences in educational attainment
D3 Butler and West - A national study of convulsive disorders in childhood
G6 Lambert and Essen - Children who have been in care
G14 Streather - A study of illegitimate and adopted children

B5 McClintock, F.H. *(Department of Criminology, University of Edinburgh)*
YOUNG CRIMINALS BECOME PARENTS: FOLLOW UP OF EX-BORSTAL BOYS

This follow-up, through administrative records, official agencies and by interview aims to ascertain current life styles, socio-economic problems, family life, etc. of former delinquent boys.

The study is being supported by the SSRC.

B6 Richman, N., Stevenson, J., and Graham, P. *(Department of Psychological Medicine, Hospital for Sick Children, Great Ormond Street)* BEHAVIOUR PROBLEMS IN PRE-SCHOOL CHILDREN

The aims of this longitudinal study are to examine the prevalence of behaviour problems and language delay in a pre-school population, to study the natural history of disorders at that age and to note its associations with such factors as family relationships and social stresses. A random sample of 3-year-olds was obtained from the Waltham Forest Family Register. The total sample was 828 children, which for the purposes of analysis has been subdivided into the children of British born and immigrant parents. Initial assessment included a structured interview with parents and completion of a behaviour check list. Four groups have been selected for more intense study: (a) a behaviour problem group of approximately 100 children matched for sex and socio-economic status with (b) a non-problem group; (c) a group of children with language delay; and (d) children of West Indian parents. Subjects have then been investigated more fully by means of interviews, psychometric and neurodevelopmental tests, and have been followed up at the age of 4.

Richman and Stevenson are now undertaking a number of analyses on the data they have obtained, e.g. examining the factors which lead to persistence of disorder

between the ages of 3 and 4 and the developmental correlates of behaviour problems. Stevenson is examining the relationships between adverse family and environmental factors and child problems. Instruments such as the Behaviour Check List and an interview developed specifically for this study are being used in other studies at other centres.

A grant has been made by the SSRC to re-examine the same children at the age of 7. This will allow for the investigation of (a) continuities between earlier problem behaviours at home and later school behaviour, (b) factors which are associated with the persistence of problems and (c) the value of early developmental assessment in predicting later reading difficulties.

The investigation has been supported by the DHSS and by the SSRC.

B7 Rutter, M., Berger, M., and Yule, W. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* PSYCHIATRIC DISORDER AND EDUCATIONAL ATTAINMENT IN A METROPOLITAN AREA AND AN AREA OF SMALL TOWNS

An earlier epidemiological study on the Isle of Wight suggested that rates of classroom disorder on the island were considerably lower than those found for children in inner London. Differences could have been attributed to either family or educational factors and the present study was designed to provide a systematic comparison between the two geographical areas to investigate these possibilities. The total population of 10-year-old children in both areas was screened with attainment tests and behavioural questionnaires. Random samples of the total populations and samples with high abnormal scores on the behaviour questionnaire were chosen for further study. Further samples were chosen to investigate particular problems (e.g. children of West Indian parents or children with reading delay). Systematic and detailed parental interviews were undertaken to assess disorder in parents and children and to evaluate disturbances of family interaction and relationships. The children were seen for individual psychological testing. Data collection is now complete and data are currently being analysed.

The project was supported by the SSRC and the Foundation for Child Development, USA.

B8 Venables, P. *(Department of Psychology, York University)* STUDY OF THE TRANSMISSION OF AUTONOMIC ABNORMALITY IN SELECTED MAURITIAN CHILDREN AND IN ADULT SCHIZOPHRENICS

This investigation originates from the findings by Mednick and Schulsinger in Denmark that amongst children who are genetically at risk for the later development of psychiatric illness (e.g. the offspring of adult schizophrenics), those who will later become ill are more likely to have certain skin conductance and cardiac response patterns. The aims of the present study are to determine (a) the stability during childhood of these characteristic patterns of response, (b) whether stability during childhood can be affected by environmental manipulation, and (c) the extent to which characteristic autonomic response patterns are shared by the parents of the index children.

The study has been supported by the MRC and subsequently by the Mauritian Goyernment and the Wellcome Foundation.

B9 Wadsworth, M. *(MRC Unit for the Study of Environmental Factors in Mental and Physical Illness, London)* A SECOND GENERATION STUDY

First born offspring of the original British National Survey cohort born after 1969 are being studied during home interviews at ages 4 and 8. Information about separations, hospitalisations, and some family rearing patterns is being obtained by interview at the age of 4, and then again at 8 years of age, when reading and vocabularly tests are also given at home. Assessments of classroom behaviour are to be obtained through the child's school. The instruments being used are comparable with those used with the original 1946 cohort, but the aim is to collect much more detailed information about family life. At this stage it is thought that the main interest of this study will be in examining continuities between generations and between ages within the second generation, as well as in describing how members of the 1946 cohort with different sorts of home experiences go about bringing up their own children.

B10 West, D.J., and Farrington, D.P. *(Institute of Criminology, Cambridge)*
CAMBRIDGE STUDY IN DELINQUENT DEVELOPMENT

This is a longitudinal study of 411 boys, the total number of 8-year-old boys at 6 primary schools in an inner London borough. The cohort was examined at intervals during childhood and adolescence, the principal aim being to investigate predictors of later delinquency. The cohort was re-examined at the age of 18 and a section of the sample seen again at the age of 21. Early behavioural and family data on this cohort are extensive and further analysis should provide information on the natural history of childhood behaviour disturbances.

B11 Zeitlin, H. *(Department of Child Psychiatry, Westminster Hospital, London)*
A STUDY OF PSYCHIATRIC PATIENTS WHO ATTENDED AS CHILDREN AND AS ADULTS

The aim of this study is to elaborate on the natural history of different forms of child psychiatric disorder and in particular to develop early predictors of persistent difficulties.

The case notes of 161 patients seen first in the children's department of the Maudsley Hospital and then again as adults are being analysed and compared with age and sex matched controls who (a) attended the same hospital as children, but not as adults, and (b) attended as adults, but not as children. It is hoped that verification of later non-attendance of the child controls in (a) will be obtained either by direct interview or through an examination of GP records.

See also:

B6 Richman and Stevenson - Behaviour problems in pre-school children
C5 Kolvin et al. - Prevalence and classification of aggressive behaviour in adolescent boys
C19 Wing and Gould - An epidemiological survey of severe subnormality and childhood psychosis in an inner London area
D24 Douglas - The relationship between early hospitalisation and later emotional disturbance
E1 Chamberlain et al. - The British Births Child Study
G9 Pollak - A follow-up of 'today's three year-olds'
G11 Rutter and Quinton - Children in residential care
I1 Giuganino and Hindley - Personality continuities during childhood
I2 Kolvin and Scott - Long-term follow-up of temperamental characteristics in twins
J14 Newson et al. - A longitudinal study of child rearing in Nottingham

C – General clinical studies

(a) Affective disorder

C1 Berg, I., and Butler, A. *(Department of Psychiatry, University of Leeds)* PROPOSED STUDY INTO THE ROLE OF FAMILY FACTORS IN SCHOOL PHOBIA

The hypothesis under investigation is that school phobic children are poor 'copers', and lack adventurousness and independence, and that these qualities are reinforced by factors in the family. The children are more emotionally reliant on their parents, but not necessarily more emotionally attached. Berg proposes to investigate a series of children presenting with school phobia by enquiring systematically into how much each child is chaperoned or helped, and the relative proportion of time spent with the parents compared with that spent with peers.

C2 Lena, B. *(Charles Burns Clinic, Birmingham)* CONTROLLED COMPARATIVE STUDY OF THE CHILDREN OF MANIC DEPRESSIVES

The aim of the study is to examine the nature of psychiatric disturbance in the children of parents with manic-depressive psychosis. The hypothesis is that this disorder is inherited and that there will therefore be more disturbance amongst the children of manic-depressive parents than amongst the children of parents with other forms of psychiatric disorder, and further that the type of disorder will differ in its periodicity and symptom clustering. The study utilises questionnaires and interviews developed by Rutter and Graham.

C3 Walker, L., Morgan, G., and Judelsohn, F. *(Department of Mental Health, University of Bristol Medical School)* SELF INJURY IN CHILDREN AND ADOLESCENTS

Morgan has undertaken a follow-up study of all adult patients admitted to casualty departments in the Avon area during a three year period for treatment of self-poisoning. During the final six months of the inception period, children aged 10-14 were also included and have been investigated with a structured interview. The scope of the investigation is limited and will not include a systematic follow-up or routine school or other'external' enquiries, although this information will be available for the large proportion of cases who are taken on for clinical treatment.

C4 Wolff, S. *(Department of Psychiatry, University of Edinburgh)* A CONTROLLED FOLLOW-UP STUDY OF 'SCHIZOID' CHILDREN

This study involves a follow-up of 74 children seen at a child psychiatric clinic whose problems were characterised by difficulty in peer relationships, bizarre preoccupations, social insensitivity, under-achievement at school, and over-sensitivity to references to themselves. The follow-up will take the form of a reappraisal of social adjustment and current psychiatric state. The aim of the study is to examine the apparent coherence of a 'schizoid' syndrome and to describe its natural history.

See also:

A1 Birleson - Depression in childhood
F2 Kolvin - A controlled study of the treatment of school refusal with anti-depressents
F4 Berg - An evaluation of length of stay in an in-patient unit on the outcome of adolescent school phobia
F10 Cameron - A trial of an ego-supportive technique of treatment of children with school refusal
G1 Brown and Harris - Studies of the part played by life events, long-term difficulties and family relationships in the onset of depressive illness.

(b) Aggressive behaviour and hyperactivity syndrome

C5 Kolvin, I., Day, K., Garside, N., Nicol, A., Iveson, S., Whittle, J., and Osselton, J. *(Nuffield Child Psychology and Psychiatry Unit, Newcastle upon Tyne)* PREVALENCE AND CLASSIFICATION OF AGGRESSIVE BEHAVIOUR IN ADOLESCENT BOYS

The aims of this work are to study the prevalence of aggressive behaviour in schools and to use the identified sample to: (a) investigate relationships between groups defined behaviourally, aetiologically and statistically; (b) study the relationship between aggression and home and social factors; (c) compare teachers, peers and self ratings of aggression; and (d) examine a number of aetiological hypotheses, namely that aggression in adolescence is not a homogenous phenomenon, that in some children it is a response to frustration, that in some it is a tension-lowering phenomenon and that in some it is due to faulty learning.

Adolescent boys in thirteen secondary schools were screened on a teacher's questionnaire and a peer sociometric scale. Boys with extreme scores or in whom there was unequivocal evidence of aggression were chosen for study and matched for age and social class with controls. This group is being investigated first on a number of behaviour, personality, attitudinal and intelligence scales. A sub-sample of these investigated in greater detail, both psychiatrically and electrophysiologically, will be compared with children referred to a psychiatric clinic and assessed in a similar way.

C6 Taylor, E., Sandberg, S., Rutter, M., and Shaffer, D. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry)* INVESTIGATIONS INTO THE PSYCHIATRIC AND PSYCHOPHYSIOLOGICAL CORRELATES OF HYPERACTIVE BEHAVIOUR

It is widely held that the hyperactivity syndrome is a distinct clinical entity, strongly associated with organic factors, and especially responsive to stimulant drug treatment. However, earlier work in the Department has suggested that hyperactive behaviours are a non-specific feature of conduct disorder. The present study aims to re-examine this possibility by investigating differences between conduct-disordered children with and without hyperactive behaviour. Pre-adolescent boys attending the Maudsley Hospital Clinical Department are screened on the hyperactivity and conduct disorder sections of the Conners Behaviour Inventory, and systematic behavioural observations are made during psychological testing. Children with an abnormal rating on these measures are then examined in more detail using a variety of psychophysiological tests and tests of attention Piloting of the Conners questionnaire has been undertaken in several British schools.

See also:

A7 Heim et al. - The Brook Reaction Test in maladjusted and delinquent adolescent
B36 Wadsworth - Early predictors of later delinquency
B5 McClintock - Young criminals become parents: follow-up of ex-borstal boys
D7 Harris et al. - Electrographic patterns of girls on remand
F6 Kolvin et al. - Survey of special classes for disruptive children
F9 Berg et al. - Truants coming before juvenile court. A controlled trial of management of outcome
F16 Kolvin - A comparative study of different interventions in disturbed children
K11 Manning et al. - Investigations of patterns of hostility in children

(c) Autism, language and communication disorder

C7 Calnan, M. *(National Children's Bureau, London)* CHILDREN WITH SPEECH PROBLEMS

This study utilises data from the National Child Development Study (1958 Cohort). Teachers, parents and doctors were all asked for information on the children's speech at age 7. A number of children were identified by only one or two of these informants.

This study will compare the characteristics of the discrepant and congruent groups. It is hoped that an analysis of this sort will reveal any defects in different screening programmes. An additional aim of this study is to examine the relationship between speech delay and early reading difficulties.

This study is being supported by the DES and the DHSS

C8 Cogher, L. and Stevenson, P. *(Newcomen Centre, Guy's Hospital, London)* SYNTACTIC STRUCTURE IN LANGUAGE-DELAYED CHILDREN

This is an investigation into differences between the syntactic structures of language delayed children and normal controls. The speech of language delayed children, identified during clinical contact, is being analysed using the system devised by Crystal, German and Fletcher. Normal controls, seen at a day nursery, have been matched for expressive language on the Reynell Scale.

C9 Cromer, R., and Dodd, B. *(MRC Developmental Psychology Unit, Institute of Education, London)* SYNTACTICAL DIFFERENCES IN THE LANGUAGE OF APHASIC AND DEAF CHILDREN

This Unit has been concerned with the study of cognitive deficit. In general, the strategy for doing this has been to take a well-defined psychological phenomenon and to study differences in function in children with a variety of diagnoses. Diagnostic differences have therefore been used to explore interferences and disturbances of development.

Both deaf and aphasic children are usually taught language by eye. A comparison between the two groups therefore offers an opportunity to examine differences in deviant language development uninfluenced by differences in the mode through which the children have acquired their knowledge.

Writing samples are being collected on subjects matched for age, social class and IQ and these are being analysed with respect to a number of grammatical variables.

C10 Folstein, S., and Rutter, M. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* A TWIN STUDY OF INFANTILE AUTISM

A wide variety of sources (including twin registers, records of the National Society for Autistic Children, and approaches to colleagues) were used to identify possible cases of same-sexed twin pairs in which one or both twins showed the syndrome of infantile autism. Twenty-five possible pairs were found and personally studied. When all information was obtained, 21 pairs met the diagnostic criteria. Diagnoses were made, blind to both pair and zygosity, from case summaries without identifying information. Concordance for cognitive impairment (including autism) was much higher in monozygotic than in dizygotic pairs. Discordance for autism (but not cognitive impairment) was often accounted for by perinatal biological hazards.

The study is supported by the MRC.

C11 Fundudis, T., Kolvin, I., George, S., Garside, R.F., Van Der Spuy, H.I.J., and Nolan, J. *(Nuffield Child Psychology and Psychiatry Department, Newcastle upon Tyne)* PSYCHOLOGICAL DEVELOPMENT OF SPEECH-RETARDED AND DEAF CHILDREN

The aim of this study has been to relate delays in early speech milestones to later behavioural and cognitive difficulties. The subjects were identified in a total population longitudinal study in Newcastle (Neligan, Prudham and Steiner) and their later cognitive, educational and language development and behavioural adjustment are being examined with reference to early speech milestones. The sample of children is also being used to examine the classification of speech delay and to investigate the concept of a 'development speech disorder syndrome'.

C12 Kolvin, I., Gonzales, P., Garside, R.F., and Leitch, I. *(Nuffield Child Psychology and Psychiatry Department, Newcastle upon Tyne)* REARING ATTITUDES OF PARENTS OF HANDICAPPED CHILDREN

The aim of the study is to contrast intra-familial variables and child rearing attitudes in different groups of children with communication disorders. The groups chosen for study are deaf, autistic and electively mute children. Measures applied to the parents include Ravens Matrices and the Mill Hill Vocabulary Test, Hogans Empathy Scale, the Maryland Parental Attitude Scale, the Walling Neighbourliness Scale and a Family Type Semantic Differential Measure.

C13 Lennox, C., Callias, M., and Rutter, M. *(Departments of Psychology and of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* COGNITIVE CHARACTERISTICS OF PARENTS OF AUTISTIC CHILDREN

Several American studies have indicated that'thought disorder' may be a common phenomenon in the parents of autistic children. However, the groups have sometimes been ill-defined, the refusal rate has been high and there have been suggestions that the presence of thought disorder may be an artefact of either anxiety or the test situation. Moreover, different studies have used different tests of 'thought disorder' and it is uncertain whether they assess the same characteristics. This study was designed to examine these matters more thoroughly. Two different tests of 'thought disorder' (the Object Sorting Test and the Kelly grid), together with measures of anxiety trait and state, and of intelligence, were administered at home to the parents of 15 autistic children with a non-verbal IQ of at least 70 and to the parents of children from the general population. The latter group was weighted to include a large proportion of middle class parents (as in the autistic group) to examine possible social class differences in 'thought disorder'.

The study is supported by locally administered DHSS funds.

C14 Martin, J.A.M. *(Nuffield Hearing and Speech Centre, Royal National Throat, Nose and Ear Hospital)* DETAILED SEMIQUANTITATIVE STUDY OF FACTORS RELEVANT TO THE PROBLEM OF THE LATE TALKING CHILD

This is a clinical research study based on 500 children with language disorders in whom hearing loss is not part of the problem.

The study is being supported by the DHSS.

C15 McGinley, M. *(Department of Education, University of Leeds)* THE TEACHING OF SIMPLE SKILLS TO AUTISTIC CHILDREN

This individual research project is designed to assess both immediate and generalising effects of teaching certain basic skills to 3-10-year-old autistic children. The project includes an assessment of some of the strategies used by the parents of autistic children.

C16 Pollak , M. *(Department of Child Health, King's College Hospital Medical School, London)* INVESTIGATION OF THE RELATIONSHIP BETWEEN SOCIAL DEPRIVATION AND DELAY IN SPEECH DEVELOPMENT

Pollak is interested in the relationship between social deprivation and speech delay. Social background, IQ and language development are investigated routinely in all children attending a special clinic because of speech delay. In addition, a number of children from deprived backgrounds who are thought to be 'bright' are seen for a similar assessment. It is hoped to draw comparisons between groups of deprived children who differ with respect to speech development and speech retarded children who differ with respect to social deprivation.

C17 Rutter, M., and Bartak, L. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* FOLLOW-UP STUDY OF AUTISTIC AND DYSPHASIC CHILDREN OF NORMAL IQ.

This is a continuation of an earlier study which set out to delineate abnormalities in autistic children using a contrast group of dysphasic children and normal controls matched for language age. This sample would highlight factors relating specifically to autism rather than to speech or language disorder alone. The study has in addition set out to examine whether differences between the diagnostic groups could be attributed to parental behaviour characteristics.

The children were first seen two years before the present study. The follow-up assessment repeats most of the measures obtained during the first study (which include extensive psychometric and language testing and detailed interviews with the parents), and has included as a new feature, parent-child observations, and tests of motor coordination and speech articulation. It is hoped that the additional data will further define the characteristics of the different groups,

differentiating between transient and persistent phenomena and adding to knowledge on mother-child interaction in this condition.

This study is being supported by the Maudsley-Bethlem Research Fund.

C18 Rutter, M., and Clark, P. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* MOTIVATIONAL FACTORS AND THE BEHAVIOUR OF AUTISTIC CHILDREN

The aim of this study is to examine the relationships between cognitive and social abnormalities in autistic children. The first set of experiments is investigating the extent to which poor performance during formal cognitive testing is due to motivational rather than cognitive factors.

Twenty-one speaking autistic children with intelligence in the ESN range are being examined, using a discrimination learning task. Negativism is identified in terms of scores significantly worse than chance. Further experiments to investigate compliance and cooperation during cognitive testing are being carried out by systematically observing the behaviour of a child performing tests of differing complexity.

This study is being supported by locally administered DHSS funds.

C19 Wing, L., and Gould, J. *(MRC Social Psychiatry Unit, Institute of Psychiatry, London)* AN EPIDEMIOLOGICAL SURVEY OF SEVERE SUBNORMALITY AND CHILDHOOD PSYCHOSIS IN AN INNER LONDON AREA

The aims of this study are: (a) to establish the prevalence of childhood autism in an area with a mixed social class constitution (it having been argued that other prevalence studies have failed to take full account of social class bias); (b) to clarify the relationship between severe subnormality and autism; and (c) to note associations between individual elements of the autistic syndrome and specific cognitive, developmental or other abnormalities.

An extensive search has been carried out to identify all severely subnormal and autistic children whose parents lived within the confines of the defined area on a given day. Interviews were then held with both a parent and a professional worker associated with the child, to obtain information on past history and current status. The children have been examined neurologically and psychometrically on a number of tests of cognitive and language function.

C20 Wing, L., and Gould, J. *(MRC Social Psychiatry Unit, Institute of Psychiatry, London)* INVESTIGATION INTO RELATIONSHIPS BETWEEN SOCIAL BEHAVIOUR AND EDUCATIONAL ACHIEVEMENT IN CHILDREN WITH COMMUNICATION DISORDERS

Three groups of 5-8-year-old children with communication disorders are being examined. These are groups of severely retarded, autistic, and receptive aphasic children. The range and quality of their social behaviour at school is being assessed by direct observation. This will then be related to the rate of their educational progress during a 12-month period.

C 21 Woolley, T., and Townsend, P. *(Department of Sociology, Essex University)* A COMPARISON OF SERVICES FOR AUTISTIC CHILDREN IN TWO COUNTIES

This investigation aims to examine the reasons for the apparent deficit in provision of local authority services for autistic children and its relationship to difficulties or delays in diagnosis. Families of autistic children are being identified through the local authority and are being interviewed in order to obtain an account of the diagnostic process and their experiences in obtaining special provision for their child.

This study is being supported by the DHSS.

See also:

F22 Rutter et al. - An evaluation of a behavioural approach to the treatment of autistic children
J13 Murray - The effect of perturbations of mother-contact on infant behaviour

(d) Disorders of habit, feeding and elimination

C22 Berg, I., Fielding, D., and Bell, S. *(High Royds Hospital, Leeds)* BLADDER DISTENSION IN NORMAL, DIURNAL AND NOCTURNAL ENURETIC CHILDREN: AN OBSERVATIONAL STUDY

This observational study is concerned with the relationship between functional bladder capacity, the motor features of urgency and patterns of urinary incontinence. The aim is to investigate the 'day enuretic' child's apparent failure to respond to bladder voiding sensations, and it is hoped that this may in turn lead to a more rational approach to treatment.

Incontinent children are studied with respect to bladder capacity and 'urgency behaviour'. Comparisons are made with a control group of children. Relationships between these measures and behavioural state are assessed.

C23 Crisp, A., Kalucy, R., and Hartmann, M. *(Department of Psychiatry, St George's Medical School, London)* ENDOCRINOLOGICAL STUDIES ON PATIENTS WITH ANOREXIA NERVOSA

A variety of endocrine function tests have been carried out on anorectic patients, including a number of adolescents. The studies in this programme investigate changes in endocrine state both at the time of diagnosis and also during the phase of weight recovery.

C24 Shaffer, D. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* BEHAVIOUR CHANGE IN ENURETICS DURING THE ACQUISITION OF CONTINENCE

Psychiatric disorder occurs more commonly amongst enuretic children than amongst children who do not wet the bed. It is not known to what extent the association is coincidental, whether disturbance arises as a consequence of wetting or whether enuresis is a symptom of underlying disturbance.

The aims of the present study are to investigate the association by monitoring changes in behaviour during and after the acquisition of continence (through treatment) in a design which controls for the non-specific effects of clinic attendance. It is hoped that measures developed for this study will have a more general application for treatment research.

The research is being supported by an MRC project grant.

C25 Shaffer, D. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* THE RELATIONSHIP BETWEEN BIOLOGICAL AND PSYCHOLOGICAL FACTORS IN ENURESIS

The aims of this programme of research are to delineate the relationships between what appear to be biological and what appear to be psychiatric factors in enuresis. More specifically, the programme of studies sets out: (a) to assess the reliability and stability of a clinical measure of functional bladder volume and to relate this to the psychiatric state and wetting behaviour of a group of out-patient enuretics - the validity of the test is also being examined with reference to cystometric measurement carried out in incontinent children admitted to the Shaftesbury Hospital; (b) to study changes in functional bladder volume during treatment and to relate any such changes to changes in continence; (c) to contrast family, social and symptom factors in enuretic children with and without a psychiatric disturbance; (d) to contrast psychiatric state of enuretic children with known anatomical abnormality of the bladder with enuretics who have no detectable abnormality.

These studes are being carried out in out-patient clinics of a local school medical service and in the Children's Ward of the Institute of Urology.

The study is being supported by a grant from the Maudsley-Bethlem endowment fund.

See also.

F1 Graham and Richman - Trial of differing treatments of sleep disorders in young children

F3 Shaffer et al. - Investigations into the mechanisms of action of imipramine in enuresis

F13 Graham and Richman - Controlled trial of family therapy and behaviour therapy in encopresis

e) Learning disorders

C26 Bryant, P., and Bradley, L. *(Department of Experimental Psychology, University of Oxford and Park Hospital, Oxford)* SPELLING AND COPYING DIFFICULTIES IN BACKWARD READERS

The overall aim of these studies is to identify perceptual difficulties in backward readers referred to a child guidance or child psychiatric clinic. One experiment aims to look at the frequency with which poor readers lose their place when copying and how a marker helps them, and in another children are being tested in their ability to recognise rhymes presented orally and visually.

The research is supported by the Oxford Regional Hospital Board.

C27 Clark, M. *(Department of Psychology, Strathclyde University, Glasgow)* THE PREDICTION OF LATER READING FAILURE

The aim of this study is to examine whether later reading failure can be predicted from the nature of pre-school educational experience, or from tests of intelligence or language ability done on entry into infant school. Three cohorts of infant school entrants differing in previous experiences and entering one of two schools were tested on sub-tests of the Wechsler Intelligence Scale for Children (WISC) and Illinois Test of Psycho-linguistic Abilities (ITPA) and a variety of other tests thought to be related to reading progress. Behavioural information is available from the teachers but there is no demographic or neurological information. Reading and spelling attainment has been assessed two years later.

The study was funded by the Scottish Education Department.

C28 Fogelman, K. *(National Children's Bureau, London)* AGE OF STARTING SCHOOL AND ATTAINMENT AND ADJUSTMENT AT AGE 11

National Child Development Study data on attainment and adjustment at age 11 are being examined with respect to age of starting school. Approximately equal proportions of the sample were allowed to start school during the 6 months before and the 6 months after their 5th birthday.

The study is being supported by the DES and DHSS.

C29 Frith, U. *(MRC Developmental Psychology Unit, Institute of Education, University of London)* STUDIES INTO READING SKILLS

Frith's interest is in the study of the components of reading, i.e. recognition and output and the contribution of visual and auditory (phonetic) processes to each of these components.

Her strategy is to contrast children who are either good or bad at *both* reading and spelling with children who show discrepancies between their reading and spelling abilities.

Both poor spellers and poor readers may have inherent difficulties in storage, recognition or retrieval, but those who are discrepant for spelling and reading ability may have access to strategies which allow them to ameliorate their difficulty.

The members of each group are being tested on visual, memory and recognition tests and are being watched for style of reading and their response to their own and deliberately introduced errors.

C30 Jones, D., and Currell, D. *(Department of Psychology, Birkbeck College, University of London)* EFFECTS OF ANXIETY ON ACADEMIC ATTAINMENT IN PRIMARY SCHOOL CHILDREN

A pilot study suggested a relationship between anxiety in class and poor academic performance. It also seemed that the influence of anxiety on attainment varied with school subject and was in part a function of the degree of formality of teaching method.

The aim of the present study is to develop an anxiety scale for use with primary school pupils and to develop a measure of formal/informal learning situations. With these instruments, it is then proposed to investigate the relationship between anxiety, intellectual ability, attainment and type of learning environment.

C31 Miles, T.R. *(Department of Psychology, University College of North Wales)* PROBLEMS EXPERIENCED BY DYSLEXIC CHILDREN AND ADULTS

The aim of this study is to investigate the nature of information processing defects in dyslexic children.

Children studied are those with reading and spelling retardation who also show a number of other abnormalities, such as difficulty over forms which involve sequencing, right-left confusion, etc. The present focus of interest is on describing difficulties in identifying stimuli of varying complexity displayed for differing lengths of time.

C32 Richardson, G., and Zangwill, O.L. *(The Psychological Laboratory, Cambridge)* ASPECTS OF PERCEPTION AND LANGUAGE IN CHILDREN WITH SPECIFIC READING DISABILITY

This study sets out to evaluate a number of hypotheses concerning visual perception and oral language in children with specific reading retardation by comparing them with a group of good readers carefully matched for verbal IQ, performance IQ, social background, size of family, school, and length of schooling. Aspects of visual perception being studied include: (a) the incidence of letter reversals and inversions, (b) the effects of spatial transformation on form recognition (faces and words), and (c) the child's conception of spatial relations. In the sphere of language, attention is being directed to: (a) general vocabulary, (b) comprehension of bipolar relations, (c) implicit knowledge of form classes, (d) serial learning ability, and (e) syntactic development.

C33 Russell, G., and Slade, P. *(Department of Psychiatry, Royal Free Hospital School of Medicine, London)* RESEARCH INTO DEVELOPMENTAL DYSCALCULIA

The aim of this investigation is to study the relationship between severe arithmetic and reading disorders and to study the clinical and psychological correlates of each and the relationship between them. Assessments are being carried out on clinical referrals.

The study is being supported by the Wellcome Trust.

C34 Thakur, B. *(Department of Social Science, City University, London)* COMPARISON OF SCHOOL ATTAINMENT OF TWO GROUPS OF ENGLISH-BORN WEST INDIAN CHILDREN WHOSE PARENTS WERE OR WERE NOT RESPECTIVELY INFLUENCED BY WESTERN MISSIONARIES WHILE STILL IN THE WEST INDIES

The hypothesis being tested is that underachievement amongst immigrant children is a function of previous culture experience or lack of it. Comparisons are being made between non Afro-Caribbean children and Afro-Caribbean children whose parents were brought up in either a Western European or a Caribbean cultural background. The children are attending secondary school and are being tested on a number of attainment tests and tests of equivalence and acculturation.

C35 Wedge, P., and Robinson H. *(National Children's Bureau, London)* STUDY OF REGIONAL DIFFERENCES IN EDUCATIONAL ATTAINMENT

This study utilises data from the National Child Development Survey (1958 cohort).

A preliminary analysis of educational attainments at age 7 and at age 11 showed significant regional differences. The present investigation is looking into these differences using municipal statistics to examine whether the differences reflect major differences in such variables as per capita expenditure on education, the nature of the housing stock, teacher turnover, etc.

This study is being funded by the Centre for Environmental Studies.

See also:

B4 Kellmer Pringle et al. - National Child Development Study (1958 cohort)
F16 Kolvin - A comparative study of different interventions in disturbed children
F25 Wright and Payne - Evaluation of a school psychological service
H5 Reynolds et al. - Secondary school influences in pupil development
H6 Rutter et al. - Secondary school influences on children's behaviour
J4 Dunn - Mothers' behaviour and the quality of children's play

D – Psychiatric disorder in children with physical illness

(a) Psychiatric disorder associated with CNS disease

D1 Bower, B., and Ward, F. *(Department of Paediatrics, Radcliffe Hospital, Oxford).* THE IMPACT OF THE DIAGNOSIS OF EPILEPSY UPON PARENTS

A consecutive series of parents of children with newly diagnosed epilepsy and a group of parents whose children have had diagnosed epilepsy for more than two years are being interviewed about their knowledge and preconceptions concerning epilepsy. The largely unstructured interview also aims to assess the parents personality and background. By contrasting the two groups it is hoped to see whether received attitudes persist in the face of actual experience.

The project is being supported by the British Epilepsy Association.

D2 Butler, N., Gill, R., and Pomeroy, D. *(Department of Child Health, University of Bristol).* HOUSING PROBLEMS OF NEUROLOGICALLY HANDICAPPED PERSONS IN AN URBAN COMMUNITY

A study is being carried out amongst a sample of families who include a physically handicapped adult (n=108) or child (n=115 - predominantly children with cerebral palsy or spina bifida). These families were the subject of an earlier investigation in the Avon area which identified type of handicap, dwelling and degree of dissatisfaction with housing. The present study is investigating these families using a semi-structured interview to study: (a) the coping behaviour of families or individuals faced with physical difficulties; (b) their stated reason for housing discontent; and (c) the extent to which the families are availing themselves of agency assistance.

The investigation is being supported by the Housing Directorate of the Department of the Environment.

D3 Butler, N. and West, P. *(Department of Child Health, University of Bristol).* A NATIONAL STUDY OF CONVULSIVE DISORDERS IN CHILDHOOD

The aims of this study are in part to establish the prevalence of convulsive disorders in the child population and in part to define differences between children with established epilepsy and those who have had isolated febrile seizures. The sample is drawn from the National Child Development Survey (1958 cohort). A sub-sample of all children who were reported by their parents to have had a convulsion by ages 7 or 11 has been selected for more intensive investigation. Diagnosis has been confirmed by GPs and paediatricians, and the groups are being compared on their performance on the Bristol Social Adjustment Guide, on educational attainment tests, as well as on demographic variables.

This study is being supported by the British Epilepsy Association.

D4 Corbett, J., Trimble, M., Nicol, T., Dupre, P., and Wiseman, M. *(Maudsley Hospital, London and Lingfield School, Sussex)* INVESTIGATION INTO THE ASSOCIATION BETWEEN SERUM ANTICONVULSANT LEVELS AND NEUROLOGICAL AND PSYCHOLOGICAL SIDE EFFECTS IN CHILDREN WITH SEVERE EPILEPSY

Corbett and his colleagues are interested in assessing the prevalence of unwanted anticonvulsant drug effects and their relationship to serum drug levels within the therapeutic range.

The entire population of this residential school for children with severe epilepsy was stabilised over a period of approximately 6 weeks. The children were then examined neurologically and psychometrically. Behaviour ratings on

the Rutter scales were obtained from houseparents and teachers. Serum anti-convulsant and folate levels were obtained at the time of testing.

The project has received support from the Lingfield Hospital Research Fund.

D5 Drillien, C., and Thompson, J. *(Department of Child Health, University of Dundee, and Department of Special Education Services, Lothian Region, Edinburgh)* AN EDUCATIONAL AND BEHAVIOURAL FOLLOW-UP OF CHILDREN WITH EARLY ABNORMAL NEUROLOGICAL SIGNS

A sample of 300 low birth weight children was seen intensively during the first year of life and was categorised with reference to transient or persisting neurological disorder. These children are now being re-examined between one and two years after their entry into school. Assessment includes testing of intelligence and educational attainment and a teacher's evaluation of behaviour on the Bristol Social Adjustment Guide.

D6 Harper, M., Kolvin, I. Tweddle, E., Noble, C., Van Der Spuy, H.I.J., and Osselton, J. *(Nuffield Child Psychology and Psychiatry Department, Newcastle upon Tyne)* A PSYCHOSOCIAL STUDY OF SPINA BIFIDA

The aims of this study are to examine the behaviour and temperament of a group of children with spina bifida and to assess the import of their condition and handicap on their family.

Forty families with 3-7-year-old children with spina bifida have been studied. Self-rating questionnaires and detailed family interviews were used to investigate the parents and families. The children's behaviour and temperament were studied using instruments devised in the Department. Findings will be compared with data obtained on a random sample of non-handicapped 5-year-old children. Cognitive development has been assessed on standard test measures.

D7 Harris, R., Corbett, J., and Gibbens, T. *(Maudsley Hospital, London)* ELECTROGRAPHIC PATTERNS OF GIRLS ON REMAND

A preliminary survey of adolescent girls admitted to a remand home showed that a large proportion had EEG abnormalities and that these abnormalities were significantly more common amongst girls who had been subject to an 'unruly order'. It is hoped that a follow-up study will evaluate the predictive value of identified EEG abnormalities.

D8 Hutt, S.J., Grant, R., and Lewis, D. *(Department of Psychology, Keele University and Centre for Epilepsy, Alderly Edge)* THE EFFECTS OF PHENOBARBITONE AND SODIUM VALPROATE ON THE COGNITIVE FUNCTION OF EPILEPTIC CHILDREN

A variety of tests on perceptual, motor and problem solving functions are being applied to institutionalised epileptic children receiving sodium valproate but without any anticonvulsant drug. A further group of children who have been treated with phenobarbitone thrice daily for long periods of time are being changed to a larger single dose of phenobarbitone. A battery of cognitive tests is being applied to the children under both conditions.

D9 Hutt, S.J., Newton, J., and Cooper, R. *(Department of Psychology, Keele University, and Department of Paediatrics, North Staffordshire Royal Infirmary)* THE EFFECT OF GENERALISED SPIKE WAVE DISCHARGE ON COGNITIVE AND PERCEPTUAL MOTOR PERFORMANCE

Earlier studies by Hutt on children with generalised spike wave discharges suggested that the occurrence of these discharges significantly impaired reaction time on a task. The aim of the present investigation is to study whether delay in response time reflects impairment of detection, execution or short-term memory and to what extent delay depends on task complexity. The children studied are drawn from institutions for epileptic children. Each child acts as his own control. An EEG recording is obtained during the course of psychological testing.

D10 Lansdown, R. *(Department of Psychological Medicine, Hospital for Sick Children, Great Ormond Street)* INVESTIGATION INTO THE PSYCHOLOGICAL EFFECTS OF RADIOTHERAPY AND CHEMOTHERAPY GIVEN TO CHILDREN SUFFERING FROM ACUTE LYMPHOBLASTIC LEUKAEMIA

This study is investigating clinical observations that leukaemic children suffer from a decrement of school achievement after CNS irradiation and chemotherapy. It is proposed to establish baseline investigations of behaviour and achievements in a group of newly diagnosed leukaemic children (aged 2½-7) and to repeat this test battery one year later. Controls will be other children suffering from a chronic physical disease and a group of healthy children. It is proposed to use parts of the McCarthy Intelligence Scale, tests of reading and mathematics, a structured interview to assess the current behaviour of the child, and a battery of neuropsychological tests.

D11 Rutter, M., and Chadwick, O. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* INVESTIGATION INTO DEVELOPMENTAL ASPECTS OF RECOVERY FROM BRAIN INJURY

Clinical observations have suggested that recovery from brain damage is related to age at injury and is greater in young subjects. The evidence for this is derived mainly from retrospective studies of children with language disorder. The present prospective study aims to examine the process of recovery from more generalised brain injury in children of different ages.

Subjects are children aged 5-16, who incur severe head injuries resulting in a period of post-traumatic amnesia of not less than one week. They are being investigated on a variety of tests of learning ability, short-term memory, attention and other cognitive skills. Baseline measures are obtained as soon after recovery from coma as is permitted by their clinical condition. The group is then being retested at 4, 12, 16 and 24 months. Results are contrasted with those from controls matched for age, sex and social class who were involved in accidents which did not damage the central nervous system.

The study is being supported by a grant from the Mental Health Trust and Research Fund.

D12 Shaffer, D., Brown, G., and Chadwick, O. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* A CONTROLLED PROSPECTIVE STUDY INTO THE COGNITIVE AND BEHAVIOURAL SEQUELAE OF SEVERE HEAD INJURY IN CHILDHOOD

This study arises from a series of investigations into the psychiatric correlates of CNS abnormality in childhood undertaken in this Department. An epidemiological study had shown that psychiatric disorder was much more prevalent in such children than in the general population. Further investigations were designed to examine whether the high rate of disturbance could be attributed to non-specific physical and social handicaps - in a large sample of children with localised head injuries - or to the locus of damage, or age at injury. It emerged that a large proportion of these injured children had a handicapping psychiatric disturbance and also that family disturbance was common in that group. The question then arose as to whether the high rate of disturbance could be explained by the high base rate of abnormality in children who are involved in accidents, whether it arose de novo as a consequence of the accident, or whether the accident increased the vulnerability to disorder in otherwise disadvantaged children.

The aims of the present study are to examine behaviour changes in a group of children on whom information is available on pre-accident status and to compare these with changes in a control group of children who have been involved in accidents not resulting in head injury. The research group obtains information on children who have been in coma for one hour or more, admitted to a number of London and provincial hospitals after head injury. Parents are interviewed within a fortnight of injury to obtain information about behaviour and adjustment during the period before the accident. Follow-up interviews and psychometric testing of the child is repeated at 4, 12 and 24 months after the accident. The structured interviews are used to obtain information on changes in behaviour,

child rearing practices and family and marital adjustment. The school is contacted directly to obtain information about social and scholastic progress.

This project is being supported by a grant from H.S. Weavers and Co.

D13 Shaffer, D., Kaufman, K., Harris, R., and Rutter, M. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry and Maudsley Hospital, London, and Park Hospital, Oxford)* THE RELATIONSHIP BETWEEN PATTERNS OF ELECTROGRAPHIC ABNORMALITY AND TYPE OF PSYCHIATRIC DISORDER IN CHILDREN

This work is an attempt to replicate previous studies which suggested that amongst disturbed epileptic children, generalised spike and wave abnormalities are characteristically associated with neurotic disorder and focal temporal discharges with conduct disorder. The study consists of a retrospective analysis of case records of children who fulfil predetermined electrographic criteria.

The study is being assisted by the British Epilepsy Association.

D14 Shaffer, D., and Sandberg, S. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* THE ROLE OF NEUROLOGICAL SOFT SIGNS, MINOR STIGMATA AND ENVIRONMENTAL FACTORS IN DETERMINING PSYCHIATRIC DISORDERS IN CHILDHOOD

Research in the United States suggests an increased prevalence of psychiatric disturbance in children with certain perceptual and motor signs, and the minor stigmata of Down's Syndrome (without associated chromosomal abnormality). To date, studies have largely lacked control for family and social adversity. In the present study a large number of 7-9-year-old boys are being examined physically and their parents are being interviewed. Behaviour is being assessed at school and at home with Rutter and Conners' Behaviour Inventories. It is hoped in this way to contrast the importance of biological and environmental factors in determining disorder.

D15 Spain, B. *(Research and Statistics Group, Inner London Education Authority)* GLC SPINA BIFIDA SURVEY

With the increased survival of children with spina bifida the ILEA wished to obtain indications of the special educational and other provisions that might be required to meet their needs. A total population sample of spina bifida survivors was identified during the first year of life. A longitudinal study has been undertaken of 180 children between the ages of 1 and 6. The study employs the Richman Pre-school Behaviour Problem Questionnaire and the Rutter Classroom Behaviour Inventory, as well as a semi-structured interview to enquire into family stress and the relationship between such stress and the degree of handicap social problems and community support. The children's developmental progress was examined using the Griffiths and Reynell scales, and at 6 years they were given a battery of psychological tests in school, including the Wechsler Pre-school and Primary Scale of Intelligence (WPPSI) and other tests, with the aim of identifying specific learning problems.

This research is funded jointly by the DHSS and ILEA.

D16 Stores, G. *(Department of Psychiatry, University of Oxford)* BEHAVIOURAL PATTERNS IN EEG SUBGROUPS OF SCHOOL CHILDREN WITH EPILEPSY

There are some indications that specific types of behavioural disturbance are associated with particular types of epilepsy but much of the evidence is impressionistic or based on highly selected groups of patients.

Relatively unselected subgroups of epileptic children attending ordinary school have been compared with non-epileptic children on teachers' ratings of various aspects of behaviour. Different patterns of disturbance have emerged in the different focal and generalised epilepsies. A contrast is seen, for example, between right and left temporal spike subgroups, the latter being the most disturbed of all. The differences are not attributable to differences in age, seizure frequency or drug treatment. The question of how far these distinct patterns apply in both boys and girls is now being examined.

This study is being supported by the British Epilepsy Association.

D17 Stores, G. *(Department of Psychiatry, University of Oxford)* FACTORS ASSOCIATED WITH EDUCATIONAL ACHIEVEMENT IN EPILEPTIC AND NON-EPILEPTIC CHILDREN ATTENDING ORDINARY SCHOOL

Although certain factors appear to be associated with poor school progress in children with epilepsy, their relative importance and their possible additive effects are not known. Information has been collected on a variety of behavioural factors and epilepsy variables (such as age of onset, clinical and EEG type, frequency of seizures and drug treatment) for a group of epileptic children whose reading levels range from well above to well below the levels expected on the basis of age and intelligence. The predictive value of these factors taken singly and in combination is being determined with the aim of identifying children at greatest risk of educational failure. In addition, a comparison is being made between these epileptic children and a group of non-epileptic children (with a similarly wide range of attainment) in terms of the relationship between behaviour at school and reading levels.

This study is being supported by the British Epilepsy Association.

D18 Taylor, D. *(Department of Psychiatry, Park Hospital, Oxford)* STUDIES ON THE COGNITIVE EFFECTS OF TEMPORAL LOBE EPILEPSY

This study involved the examination of case material obtained at the Maudsley/Guy's Neurosurgical Unit on 296 cases of temporal lobectomy. The data being studied consist of pre- and post-operative psychometric test results. It is assumed that where temporal lobectomy leads to an improvement in cognitive and verbal skills the removed temporal lobe was redundant and that alternative areas of cortex were subsuming the original function. Where temporal lobectomy has led to a reduction in psychometric performance it is assumed that undamaged areas of the temporal lobe were of continuing importance. A further assumption is that histological evidence of mesial temporal sclerosis allows the onset of the lesion to be dated to the time of the first seizure. The analysis of pre- and post-operative data should therefore enable Taylor to draw conclusions about relationships between age at injury and transfer of cortical function.

D19 Taylor, D. *(Department of Psychiatry, Park Hospital, Oxford)* PHYSICAL GROWTH IN CHILDREN WITH EPILEPSY

The study originated with a clinical observation that, compared to other patient groups, a disproportionate number of epileptic children were of low stature. In a pilot exercise Taylor analysed the clinical material at the Park Hospital (250 children) and studied the relationships between stature, age of first seizure, IQ, birth weight and social class. His preliminary findings are that height in this population is unrelated to social class or birth weight, but is related to age of first seizure and IQ. Taylor proposes to replicate the study on a larger and more representative sample, obtaining more background information on each child.

D20 West, P. *(Department of Child Health, University of Bristol)* AN INVESTIGATION INTO THE SOCIAL CONNOTATIONS AND CONSEQUENCES OF THE LABEL 'EPILEPSY'

This is a descriptive study to investigate concepts of epilepsy among parents of an epileptic child, the manner in which this generates coping strategies both within and outside the family, and the consequences for the child's identity and behaviour. Twenty-four families - drawn at random from a paediatric clinic - have been interviewed to elicit the nature and origins of ideas about epilepsy, interaction patterns, and their evaluation of the child. In addition, parent-doctor consultations have been observed and documented to discover how epilepsy is 'managed' in the clinic context. In a related exercise, a street survey was undertaken to investigate public knowledge and images of epilepsy.

The study is being supported by the British Epilepsy Association and the SSRC.

See also:

E2 Davies - Long-term follow-up of low birth weight children
E3 Dobbing and Whitfield - Manchester perinatal growth and development study.

(b) Psychiatric disorder and other physical illness

D21 Baum, D. and Gath, A. *(Department of Psychiatry, University of Oxford)* PSYCHOLOGICAL FACTORS INFLUENCING CONTROL OF DIABETES IN CHILDREN OF SCHOOL AGE

It has been suggested that psychological factors are important in diabetic children who repeatedly 'fall out of control' and require hospital admission. This study is investigating the problem by obtaining information on current behaviour and family background of approximately 80 diabetic children between ages 5 and 15 and a classroom control group. Data are obtained by interview and classroom questionnaire. Behaviour variables are then being related to a number of indices of diabetic control.

This study is being supported by the British Diabetic Association.

D22 Bentovim, A. *(Department of Psychological Medicine, Hospital for Sick Children, Great Ormond Street)* RETROSPECTIVE CASE STUDY OF CHILDREN REFERRED TO A HOSPITAL AFTER PARENTAL ABUSE

Bentovim leads a hospital committee which examines all cases of abuse diagnosed at the Hospital for Sick Children. One hundred such cases have been seen since 1973. After the first 50 cases, an item sheet was devised and cases are now routinely rated on this item sheet. It is intended to describe the abused population seen at the hospital.

D23 Davis, D.R., Apley, J., Grimaldi, C., Fill, G., and Hartog, M. *(Departments of Mental Health and Child Health, University of Bristol)* THE STUDY OF GROWTH RETARDATION IN YOUNG CHILDREN

A series of children of short stature referred to a growth clinic without demonstrable organic disease or dysfunction are investigated by a multi-disciplinary team, which includes a psychiatrist and a dietitian, in respect of diet and parental attitudes to feeding. Comparisons are made with a control group.

The study is supported by various local grants.

D24 Douglas, J. *(MRC Unit for Research into Environmental Factors in Mental and Physical Illness, London)* THE RELATIONSHIP BETWEEN EARLY HOSPITALISATION AND LATER EMOTIONAL DISTURBANCE

Findings from the 1946 British National Survey relating early stress events to emotional disturbance in childhood have already been published. The study is being extended to examine the association between early hospitalisation and problems in late adolescence and adult life. Emphasis is being laid on reducing bias through selection factors, arising from the type of illness and through selective admission to hospital.

D25 Howarth, R., Barratt, M., and Hawks, G. *(Department of Renal Medicine and Department of Psychological Medicine, Hospital for Sick Children, London)* CHILDREN ON RENAL DIALYSIS AT HOME - PSYCHOSOCIAL IMPACT ON CHILD AND FAMILY

The aim of this study is to examine the social and behavioural effects of home-based renal dialysis treatment. Measures of recent child behaviour and emotional state and the mental state of parents and family are obtained using the measures developed by Rutter et al.

Twenty-four children are being seen on two occasions with an interval between assessments of one year.

This study is being supported by the DHSS.

D26 **Markova, I., and Forbes, C.** *(Department of Psychology, University of Stirling and Department of Medicine, University of Glasgow)* **THE MOTHER-CHILD RELATIONSHIP IN HAEMOPHILIACS OF PRE-SCHOOL AGE**

Haemophilic children - especially vulnerable to the effects of accidental injury- often appear to be handicapped by over-protection. This problem is being looked at in an observational study of all haemophilic children aged 3-5 in the west of Scotland. The study aims to examine; (a) verbal and non-verbal manifestations of maternal anxiety, (b) the techniques used to exercise control over the child's behaviour, and (c) the contingencies of over-protective behaviour.

Children and mothers are being videotaped in the laboratory in a series of play situations which include differing degrees of hazard. Comparisons are being made with a group of otherwise matched mothers and children without medical disorder.

This study is being supported by the Haemophilia Society.

D27 **Markova, I., and Forbes, C.** *(Department of Psychology, University of Stirling and Department of Medicine, University of Glasgow)* **SELF PERCEPTION AND RISK-TAKING BEHAVIOUR IN HAEMOPHILIACS AND OTHER HANDICAPPED CHILDREN**

The investigators are interested in the acquisition of concepts of intentionality and responsibility in young children in general and how these concepts might be distorted in children with conditions which result in parental over-protection. It is also hoped that the investigation will lead to a better basis on which to provide a counselling service to the families of children with haemophilia.

Children with mild or moderate haemophilia or other non-visible handicaps are being compared with children with severe haemophilia and severe visible handicap and with children without medical problems. The children are interviewed about their interests and friendships and are given a projective test designed to measure ratings of intentionality and responsibility. The families are interviewed to determine levels of anxiety, and to enquire into their use of child control techniques and the extent to which they curb or encourage independence.

This study is being supported by the Scottish Home and Health Department.

D28 **Smith, H., Harvey, D., Harvey, S., and Prince, J.** *(Department of Paediatrics, St Charles Hospital, London)* **THE EFFECT OF A PLAY THERAPIST ON CHILDREN'S PLAY IN HOSPITAL**

The amount and type of play will be observed in children admitted to hospital. The study will be conducted over a period of three months. During the middle month the play therapist on the ward will be withdrawn. This will enable an assessment to be made of the effect of play workers on play and the extent to which nurses can make up for their absence.

D29 **Standen, P., and Waugh, W.** *(Department of Psychiatry and Orthopaedic Surgery, University of Nottingham Medical School)* **LONG-TERM EFFECT OF HOSPITALISATION FOR TREATMENT OF CONGENITAL DISLOCATION OF THE HIP (CDH)**

The intention of this study is to examine the long-term effects of prolonged hospitalisation. The study is at present uncontrolled and includes patients still attending the CDH clinic. Families are interviewed in a standard fashion about the child's stay in hospital and subsequent adjustment. The sample is selected in that not all children treated for CDH are followed up at this clinic.

D30 **Wolff, S. and Wills, P.** *(Department of Psychological Medicine, Royal Hospital for Sick Children, Edinburgh)* **PSYCHIATRIC STATUS OF CHILDREN OF SMALL STATURE**

The aim of the research is to examine the social correlates of small stature. The Department of Child Life and Health in Edinburgh is currently surveying all Scottish children below the third percentile in height, with the intention of determining the prevalence of human growth hormone (HGH) deficiency. The Department of Child Psychiatry is examining the children with a view to

identifying the social, psychometric and behavioural correlates of small stature. It is proposed to question 70 children identified in the low stature study, and investigate them with the Rutter Parents and Teachers Behaviour Questionnaires and Wolff's Behaviour Inventory for use with parents, as well as making further enquiries about family and social background.

The HGH deficiency study is supported by the MRC.

See also:

F8 Bentovim and Clements - Controlled evaluation of a handbook for parents whose children are undergoing major heart surgery
F12 Evans et al. - Communication, liaison and support for parents of the handicapped child
F17 Lask - A controlled trial of family therapy for asthmatic children
F19 Norrish and Godfrey - Behaviour modification in childhood asthma
F21 Pinkerton - Establishment and evaluation of a service utilising nurses to counsel families of psychiatrically disturbed physically ill children
F23 Tizard et al. - Evaluation of a comprehensive medical and social service for pre-school children and their families
J9 Gregory et al. - Interaction between mothers and their deaf infants

E – Later effects of obstetric and perinatal abnormality

E1 Chamberlain, R., Davey, A., and Simpson, R. *(Department of Paediatrics, St Mary's Hospital Medical School, London)* THE BRITISH BIRTHS CHILD STUDY

The aim of this longitudinal study has been to assess the effect of fetal malnutrition and a variety of other perinatal factors on subsequent physical and mental development. A randomly selected sample (n=1609) consisting of 1 in 10 of all children born of married parents during a week in 1970 (The British Births Survey) has been examined at 22 and at 42 months by community medical officers. This sample was boosted by *all* legitimate children whose birth weight was below the 5th percentile for length of gestation, all legitimate postmature children and twins in the original BBS sample. There had been an attrition rate of approximately 25 per cent at each examination. Developmental measures were devised especially for this study and their agreement with previously standardised developmental scales was tested during a pilot period. Piloting also included an assessment of inter-rater reliability for the examination. The investigation included a limited social enquiry, information about illness and hospital admission: a physical and developmental assessment and a limited assessment of behaviour.

The sample investigated in this study will have been re-examined at the age of 5 in the Child Health and Education in the Seventies investigation (see Butler et al., B2) in which there is greater emphasis on behaviour. It should therefore be possible to link later findings with data obtained in this study.

The study is currently funded by the DHSS, but previously received grant support from the MRC.

E2 Davies, P.A. *(Department of Obstetrics, Hammersmith Hospital, London)* LONG-TERM FOLLOW-UP OF LOW BIRTH WEIGHT CHILDREN

Davies is continuing to follow up a series of children of low birth weight. Results of the follow-up of very low birth weight children have already been published and data are now being collected on children who weighed between 1500 and 2000 g at birth. Children are being assessed with the Denver Developmental Screening Test and the Wechsler Intelligence Scale for Children.

The study is being supported by the Nuffield Foundation.

E3 Dobbing, J. and Whitfield, C. *(Department of Child Health and Department of Obstetrics, University of Manchester)* MANCHESTER PERINATAL GROWTH AND DEVELOPMENT STUDY

This is an open-ended project which aims to plot the physical growth and social and cognitive development of children whose gestational development, and in particular growth, had been carefully and systematically documented. They are the children of mothers who attended the antenatal clinic at the University Hospital of South Manchester where, at three-weekly intervals, fetal growth in general and skull growth in particular are measured by ultrasound techniques. All data collected during gestation are stored on magnetic tape. Proposals for the later investigation of these children are currently being formulated and in the first instance will focus on anthropometry and neuro-motor development. However, it is intended to introduce measures of cognitive, emotional and social development at a later stage. Dobbing would like to include measures that have already been employed in other large-scale surveys, thus providing an opportunity for cross-referencing between instruments used in large-scale and smaller and more intensive investigations.

The current research programme is funded by an endowment from the National Fund for Research into Crippling Diseases.

E4 Harvey, D., Prince, J., Firles, M., and Norman, A.P. *(Department of Paediatrics, Queen Charlotte's Hospital, London)* A STUDY OF BABIES IN INCUBATORS

The aim of this study is to describe differences in how mothers handle their infants under normal care conditions and in special care units for the newborn. This is seen as a preliminary phase of a further study into the role of early mother-infant interaction and the later outcome of babies who have received special care.

E5 Illsley, R., Mitchell, R., Cater, J., Samphier, M., and Graham, R. *(Medical Sociology Unit and Department of Child Health, Aberdeen and Dundee)* SOCIAL AND MEDICAL FOLLOW-UP OF LOW BIRTH WEIGHT INFANTS

This is a longitudinal study of a total population of singleton deliveries, born weighing less than 2.5 kilograms, matched with controls of normal birth weight. The purpose of the study is to investigate the previously observed differences in the development and achievement of low birth weight children by examining their clinical and social experiences, including possible differences in methods of upbringing during the first year of life. The data have been collated and are currently the subject of analysis.

The study is being funded by the MRC and the National Fund for Research into Crippling Diseases.

E6 Jaques, N., Richards, M., and Brimblecombe, F. *(Unit of Research on Medical Application of Psychology, Cambridge, and Royal Devon and Exeter Hospital, Exeter)* AN EVALUATION OF THE EFFECTS OF INCREASING MATERNAL INVOLVEMENT IN THE CARE OF CHILDREN IN A NEONATAL INTENSIVE CARE UNIT

This study represents an extension of Richards and Brimblecombe's interest in early mother-child separations resulting from medical decisions.

First born preterm infants of 35-38 weeks gestation, admitted to a neonatal special care unit are being randomly allocated to a group which receives conventional treatment or to a group in which provision is made for the mother to live in and provide general nurturing care.

The two groups are being followed up for one year during which time comparisons will be made with respect to physical growth and development, behavioural differences in the baby and the mother's own feelings of competence.

The study is being supported by the MRC.

E7 McGurk, H. *(Department of Psychology, University of Surrey)* A STUDY INTO THE EFFECT OF VERY EARLY SEPARATION BETWEEN MOTHER AND CHILD

It is proposed to examine certain aspects of social behaviour in infants who have undergone varying degrees of early separation from their mothers. These include infants admitted into: (a) a special care unit where no provision is made for the mother's involvement; (b) a special care unit where handling and visiting are encouraged; (c) a maternity ward in which infants are separated except during nursing time; and (d) a unit in which infants are kept close to their mother throughout the day.

Initial evaluation will include an interview with the mother about her attitudes to separation. The infant's response will be examined on a test of habituation to redundant visual stimuli. Mother-infant interaction will then be observed on three occasions during the 6 months after the child's discharge from hospital. This is essentially a pilot study. If justified by results, then a more extensive longitudinal study will be undertaken.

E8 Mills, M., Rosenblatt, D., Packer, M., Lieberman, B., Foss, B., and Oppe, T. *(Department of Psychology, Bedford College, London and Departments of Paediatrics and Obstetrics, St Mary's Hospital Medical School, London)* THE EFFECTS OF OBSTETRIC MEDICATION ON NEONATAL BEHAVIOUR

The aim of this study is to examine the effects of analgesia used during labour on the behaviour of the neonate. Attention is being paid to selection factors

which might operate in the prescribing of different types of medication and also to emotional variables in the mother. Women recruited for study are those with no previous psychiatric history, who have had an uncomplicated pregnancy. Measures of the mother's psychological state include the Malaise Inventory, the Nowlis Mood Adjective Checklist, and a form of the interview devised by Wolkind et al. (G17)

Blood levels of analgesic are measured at birth and at intervals afterwards and are related to a variety of behavioural measures. The infant is observed in a time-sampling procedure for the first twenty minutes after birth, and its sensory abilities and state of alertness at this time are assessed. The Brazelton Neonatal Behavioural Assessment is used on days 1, 3 and 7, and again at 3 and at 6 weeks of age, to examine individual differences and possible behavioural consequences of the drugs. Mothers keep a record of their baby's sleep and feeding patterns for the first week. The Prechtl Neurological Examination is carried out on day 6. The relationship of mother and infant is studied from a number of aspects, including the filming of a feed before discharge from hospital. Further data collected include recordings of nutritive and non-nutritive sucking, and an auditory operant learning task at 3 and at 6 weeks.

Various aspects of this investigation are being supported by the MRC, Duncan, Flockhart and Co. Ltd., the Wellcome Trust and the Nuffield Foundation.

E9 Richards, M., and Brimblecombe, F. *(Unit for Research on Medical Applications of Psychology, Cambridge and Royal Devon and Exeter Hospital, Exeter)* THE FREQUENCY OF PARENTS VISITING INFANTS IN AN INTENSIVE CARE UNIT

This study aims to examine the constraints on parental visits to a regional special and intensive care unit and to survey the actual frequency of visiting by parents. Two hundred consecutive admissions are being studied and a record of visits is maintained. A nurse trained in research methods undertakes a prolonged home interview with parents after the infant is discharged.

The study is being supported by the DHSS.

E10 Stewart, A., and Strang, L. *(Department of Paediatrics, University College Hospital Medical School, London)* A LONG-TERM FOLLOW-UP OF LOW BIRTH WEIGHT INFANTS WITH SPECIAL REFERENCE TO LATER EFFECTS OF PERINATAL EVENTS

The Department has developed a sophisticated Neonatal Intensive Care Unit in which detailed, and in some cases automated, records of the child's clinical state and treatment are maintained. A systematic follow-up programme has been initiated to monitor the long-term effects of early management. The groups currently being followed up include infants born weighing less than 1500 g, infants with serious haemolytic disease, infants who have had hyaline membrane disease requiring assisted ventilation, and infants brought into the Unit after delivery elsewhere. Children are followed up with frequent clinical, neurological and developmental testing to the age of 18 months. Psychological testing is done at 3½ years, 5 years and 8 years, at which times different measures of intelligence, language and social adjustment - and at 8 years educational attainment and motor skills - are obtained. The measures do in some respects overlap with those used by Drillien and Thompson (see D6). It is proposed to follow the children to age 11 years.

The study is being funded by a grant from the DHSS and from Birthright.

E11 Thomson, A.J., Searle, M., and Russell, G. *(Departments of Child Health and Psychology, University of Aberdeen)* QUALITY OF SURVIVAL AFTER SEVERE BIRTH ASPHYXIA: A LONG-TERM FOLLOW-UP STUDY

The outcome of a total group of infants born in a 5-year period in Aberdeen, and severely asphyxiated at birth, with an Apgar score of 0 at 1 minute or of 0-3 at 5 minutes of age, was compared with that of a control group. Seventy-one per cent of the survivors have been fully evaluated at ages 5-10 years and limited information is available on a further 20 per cent. Follow-up includes assessment on the Illinois Test of Psycholinguistic Abilities and the Bender Gestalt, full development and neurological evaluation including hearing and vision testing and examination of the school medical records.

The study is supported by a grant from the Grampian Area Health Board Research Fund.

See also:

B2 Butler et al. - Child health and education in the seventies
D5 Drillien and Thompson - An eduational and behavioural follow-up of children with early abnormal neurological signs
J16 Richards and Dunn - The Cambridge longitudinal study of child development and mother-child relationship

F – Treatment studies

(a) Drug studies

F1 Graham, P., and Richman, N. *(Department of Psychological Medicine, The Hospital for Sick Children, Great Ormond Street, London)* TRIAL OF DIFFERENT TREATMENTS OF SLEEP DISORDERS IN YOUNG CHILDREN

The principal of this study is to examine the efficacy of drugs used in treating sleep disorders in young children.

Families with a child aged between 18-24 months will be identified through the Waltham Forest Family Register. Using a postal questionnaire, a group of children with severe sleep disorders will be selected. The efficacy of two different drugs and a placebo in improving sleep will be compared. The possibility of affecting sleep through behavioural techniques will be examined. Information will also be obtained on the developmental, temperamental, family and social characteristics of children with sleep disorders compared with a group of controls.

The investigation is supported by the MRC.

F2 Kolvin, I., Berney, T., Bhate, S., Jeans, J., Scarth, L., Garside, R., and Kay, B. *(Nuffield Child Psychology and Psychiatry Unit, Newcastle upon Tyne)* A CONTROLLED STUDY OF THE TREATMENT OF SCHOOL REFUSAL WITH ANTI-DEPRESSANTS

The aim of the study is to examine the efficacy of anti-depressant medication in the treatment of school refusal, and to note differences in the characteristics of responders and non-responders indicative of psycho-pathological differences in the two groups. Forty children aged between 9-14 are being recruited into the study. They are randomly allocated to a drug or a placebo group. Both groups receive the usual range of supportive treatments and the treating psychologist is unaware of the drug condition. Dosage is adjusted for weight or age, and is graduated so that the maximum dose is reached after a gradual build-up. Patients are given a 6-week supply of drug and there are no checks on drug consumption. Assessment measures include initial rating on a symptom check list, and standardised rating at four weekly intervals after treatment has started.

F3 Shaffer, D., Stevenson, J., and Thomas, V. *(Department of Child and Adolescent Psychiatry and Department of Pharmacology, Institute of Psychiatry, London)* INVESTIGATIONS INTO THE MECHANISMS OF ACTION OF IMIPRAMINE IN ENURESIS

Imipramine successfully inhibits enuresis. It is hoped that elucidation of the way in which this drug works will lead to a better understanding of the mechanisms which underlie the condition. The investigations consist of a series of animal experiments in which the effect of imipramine upon changes in bladder function is monitored. The focus of the study is upon the relative importance of central and peripheral mechanisms. Clinical studies are also being carried out to examine whether the actions of imipramine can be mimicked by drugs which possess some but not all of the pharmacological actions of imipramine.

See also:

D4 Corbett et al. - Investigation into the association between serum anti-convulsant levels and neurological and psychological side effects in children with severe epilepsy
D8 Hutt and Grant - The effects of phenobarbitone and sodium valproate on the cognitive function of epileptic children
E8 Mills et al. - The effects of obstetric medication on neonatal behaviour

(b) School and in-patient treatments

F4 Berg, I. *(High Lands Adolescent Unit, Burley in Wharfedale, Yorkshire)* AN EVALUATION OF LENGTH OF STAY IN AN IN-PATIENT UNIT ON THE OUTCOME OF ADOLESCENT SCHOOL PHOBIA

Clinicians differ in their view on whether it is advisable to return school phobics to school at the earliest opportunity, or whether underlying problems should be dealt with first. In the present study successive school phobic referrals are allocated randomly to a three-month and to a six-month inpatient regime. The children are not otherwise treated any differently. Initial assessment of the children includes a clinical interview which is rated on a standard item sheet and a number of personality questionnaires as well as routine psychometry. Similar measures are used to assess outcome. Part of the treatment is undertaken by specially trained nurse therapists. Berg is aiming to have sixteen children in each group, eight boys and eight girls.

F5 Irwin, E., Powley, P., and Turland, D. *(Department of Child Psychiatry, Hollymoor Hospital, Birmingham)* SURVEY OF TEENAGERS ADMITTED TO CHILDREN'S AND COMMUNITY HOMES, RESIDENTIAL MALADJUSTED SCHOOLS AND HOSPITAL ADOLESCENT UNITS

This is an investigation into the similarities and differences between adolescents admitted to; (a) a psychiatric in-patient unit, (b) residential provisions of the Social Services Department and (c) residential schools for the maladjusted.

The project has received support from the DHSS.

F6 Kolvin, I., McMillan, A., Wrate, R., Nicol, A.R., and Wolstenhome, F. *(Nuffield Child Psychology and Psychiatry Unit, Newcastle upon Tyne)* SURVEY OF SPECIAL CLASSES FOR DISRUPTIVE CHILDREN

This is an evaluation of existing facilities that have been established to contain difficult children in ordinary schools and in special school-linked units. The survey will examine a sample of classes throughout Great Britain and will study all such facilities in the north east. It will also focus on management style. McMillan and Wrate are currently piloting both a research interview and direct observational techniques. In addition, the research team proposes to participate in setting up a series of special units with either a dynamic or behavioural approach, and it will participate in a comparative evaluation of these pilot units.

This study has been commissioned by the DES.

F7 Wilkie, R., Gudim, M., and Borzony, P. *(Department of Social Administration, Strathclyde University)* A SURVEY OF SCHOOLS FOR MALADJUSTED CHILDREN IN SCOTLAND

The aim of this study is to develop indices of effectiveness which could be applied to schools for maladjusted children. The research method consists primarily of interviews with pupils and staff, with enquiries being made about the schools' organisational structure, staff attitudes, the degree of staff and school involvement with pupils and families, etc. No independent outcome measures have been used and in assessing effectiveness, the team has utilised overall evaluations by staff and older children.

This investigation was commissioned by the Scottish Education Department.

See also:

A10 Mitchell and Coleman - Development of observational techniques to investigate the efficacy of treatment in disorders in pre-school children
F16 Kolvin - A comparative study of different interventions in disturbed children
G15 Tizard and Hodges - A follow-up of 8-year-old children whose early years were spent in residential care

(c) Other treatment studies

F8 Bentovim, A., and Clements, P. *(The Hospital for Sick Children, Great Ormond Street, London, and Child Development Research Unit, Nottingham University)* CONTROLLED EVALUATION OF A HANDBOOK FOR PARENTS WHOSE CHILDREN ARE UNDERGOING MAJOR HEART SURGERY

Clements previously undertook an observational study on children admitted for major heart surgery. Her feeling was that parents were inadequately prepared for their child's admission to the intensive care unit. The current study has involved the preparation of an explanatory handbook. Children, stratified by age, are randomly allocated to a group with or without a booklet. The outcome measure is a scale designed to assess anxiety in the child before admission and again at follow-up. This is part of a more general study into communication between parents and paediatricians.

F9 Berg, I., Hullin, R., and Tyrer, S. *(Department of Psychiatry, University of Leeds)* TRUANTS COMING BEFORE JUVENILE COURT - A CONTROLLED TRIAL OF MANAGEMENT OF OUTCOME

Magistrates in a northern English city were systematically biased in their management of cases of truancy. Whereas some routinely recommended supervision by the Social Services Department or Probation Service, others showed a preference for a period of adjournment during which time school attendance was monitored. Berg and Tyrer were interested in taking advantage of these apparent differences to study whether outcome varied with management. They studied 153 truants coming before the courts in 1972/1973 and obtained indices of social deprivation and other family measures. Their findings were that truants 'treated' with adjournment were more likely to return to school than children treated with supervision. However, an analysis of background factors showed that selection processes made the sentencing procedures less consistently related to the bias of the magistrate than originally supposed.

As a result of these findings a prospective study has begun in which proven truants are randomly allocated to 'supervision' or 'adjourn' groups. As well as assessing outcome with respect to school attendance, measures on the Rutter and the Conners Teacher Questionnaires are obtained three months after sentencing. Analysis includes a study of interactions between response to treatment and background characteristics. The follow-up enquiry in the schools is being undertaken by Berg with the help of the Educational Welfare Department.

F10 Cameron, H.C. *(Department of Child Psychiatry, St George's Hospital Medical School, London)* A TRIAL OF AN EGO-SUPPORTIVE TECHNIQUE OF TREATMENT OF CHILDREN WITH SCHOOL REFUSAL

A consecutive series of children up to the age of 14½ who refuse to go to school is being studied. The children have been referred to a teaching hospital child psychiatry department and treated by a single therapeutic team in a generally similar fashion. This involves making specific recommendations and vigorously supporting the child's school and parents, and using a realistic but sympathetic approach with the child. Outcome measures include the duration and amount of therapy required before the child returns to school, and relapse rate. It is proposed to compare the outcome in this group with that of a group of similar children seen at other clinics by other practitioners. No attempt is being made to impose a protocol of alternative treatment.

The study is receiving support from the ILEA.

F11 Coleman, J., Laishley, K., and Pond, D. *(Department of Psychiatry, London Hospital Medical School)* PROBLEM-ORIENTED COUNSELLING OF CARETAKERS OF PRE-SCHOOL CHILDREN

This work provides an evaluation of the impact of problem-orientated caretaker counselling techniques, coupled with the use of a specially prepared booklet. It is proposed to record the frequency of certain problem behaviours in a day nursery before and after intervention.

The study is being funded by a grant from the Goldsmiths Company.

F12 Evans, R., Jolly, H., Newson, J., and Newson, E. *(Department of Paediatrics, Charing Cross Hospital, London, and Child Development Research Unit, Department of Psychology, University of Nottingham)* COMMUNICATION, LIAISON AND SUPPORT FOR PARENTS OF THE HANDICAPPED CHILD

The Department of Paediatrics at Charing Cross Hospital has established a multi-disciplinary 'Child Development Centre' where children with physical and mental handicap, and also those with predominantly emotional disorders, can be diagnosed and assessed and can receive specialised treatment. Treatment facilities are combined with a day nursery which is attended by the normal children of hospital staff.

Evans is undertaking an 'Action Research' project on a sample of 18 families whose handicapped or disturbed children are to be admitted to the Centre. Her role is to prepare the family for admission and subsequently to act in a liaison and advisory role, offering both support and practical advice in handling problems. All Evans' work is done in visits to the family's own home: the Centre staff are clinic based.

The aim of the research is to provide a peripatetic service which is responsive to the needs expressed by parents, and to investigate the varying use that parents make of this service.

The investigation is being supported by the DHSS.

F13 Graham, P., and Richman, N. *(Department of Psychological Medicine, The Hospital for Sick Children, Great Ormond Street, London)* CONTROLLED TRIAL OF FAMILY THERAPY AND BEHAVIOUR THERAPY IN ENCOPRESIS

The principal aim of this study is to investigate alternative methods of treatment in encopresis. As well as examining symptomatic improvement Graham and Richman are also interested in measuring whether different treatments affect the child's self-esteem or family relationships. It is also proposed to investigate the relationship between soiling and psychiatric disturbance. Groups of encopretics with no obvious physical cause will be compared with those who have persistent soiling as a result of a physical disorder. The assumption is that disturbance in the latter group is likely to be a consequence rather than the cause of the soiling.

This study is being supported by the MRC.

F14 Hill, J., and Berse, P. *(Tavistock Institute of Human Relations, London)* THE CHILD GUIDANCE SERVICE IN A LONDON BOROUGH - A PILOT EVALUATIVE STUDY

This is a pilot investigation into the work of a local authority child guidance service which will serve, in part, as a feasibility study for a more extensive research project and, in part, as a guide to the borough in the further development of services.

F15 Jehu, D., Turner, R.K., and Morgan, R.T.T. *(University of Leicester School of Social Work)* BEHAVIOUR MODIFICATION WITH CHILDREN IN THE CARE OF A SOCIAL SERVICES DEPARTMENT

The aim of this research programme is to investigate the feasibility and efficacy of using a behavioural approach in the treatment of a variety of psychological problems exhibited by children who are in the care of a local authority and living in residential children's homes or foster homes.

The problems being investigated include nocturnal and diurnal enuresis, encopresis, aggression, non-attendance at school and self-care deficits in retarded children. A wide variety of behavioural procedures are used to meet the treatment needs of individual children, and special attention is given to assessing the practical problems entailed by these procedures in the particular setting where the research is being conducted.

The research is supported by the Department of Health and Social Security and the City of Birmingham.

F16 Kolvin, I. *(Nuffield Child Psychology and Psychiatry Unit, Newcastle upon Tyne)* A COMPARATIVE STUDY OF DIFFERENT INTERVENTIONS IN DISTURBED CHILDREN

Origins. Kolvin had for some time been interested in comparing the effects of different forms of treatment for maladjusted children. An earlier study of children placed in different treatment settings had produced useful information on the relationship between the presenting clinical features and subsequent outcome. However, conclusions about the effects of intervention were complicated as: (a) children had not been randomly allocated to the different treatment settings; (b) treatment within a given setting varied; and (c) children within a given treatment setting were not homogeneous with respect to disorder. However, the study established Kolvin's interest in intervention research, and possibly as a result of this he was approached by the DES to undertake the present study in which the effects of different forms of intervention would be compared.

Design. Children in two age groups are being studied - a younger group aged 7-8 and an older group aged 11. They are drawn from six junior and six secondary schools chosen for the study by the local education department. Within each school children identified as maladjusted were allocated to the same treatment group. As well as this 'within-school' comparison, a 'between-school' comparison has been built into the design.

Selection of subjects. Children meeting any of the following criteria were considered for inclusion: (a) being frequently absent from school for trivial reasons; (b) having a reading quotient below a certain value (this applied for the 7-8-year-old group only); (c) abnormal scores on a classroom sociometry measure; (d) a score of more than 10 on the Rutter B Scale Teachers Inventory. An additional criterion for the older children was an abnormal score on the Junior Eysenck Personality Inventory. On the basis of this screening technique the most abnormal quartile was selected for intervention. This group was further investigated with a parent and classroom behaviour inventory and detailed social and family information was obtained at interview. Children were then further classified into those with primarily conduct and those with primarily emotional disorders.

The interventions for the younger group used in the study consisted of: (a) 4 months of play therapy; (b) 18 months of classroom nurture enrichment; and (c) 12 months of teacher consultation and parent counselling. The older groups were allocated to one of the following types of treatment: (a) talking groups with a trained psychiatrist or therapist (4 months); (b) inclusion in a class with a teacher trained in systematic behaviour therapy based on social reinforcement principles; or (c) systematic parent counselling. Attempts have been made to reduce contamination between groups by ensuring that children in the same class do not receive more than one type of treatment, and by staggering the interventions so that the control groups and the individual treatment groups were seen first and the interventions which involved specific changes in teaching behaviours were administered last. In addition to this main study a sub-group in different schools was treated with remedial reading. Initial assessment was similar in all cases; subsequent assessments were carried out 2 months and 9 months after completion of the intervention and 36 months after inception. Mullin and Wrate, have in addition carried out a *descriptive study* of institutional features of all the schools included in the intervention study as well as several other ordinary and special schools. The focus of interest was the rigidity or flexibility of routine, the closeness between different staff members and staff and pupils and the congruency or unity of the school as indicated by the way that staff and pupils identified with the school. The instrument used by Mullins was an inventory delivered to the head teacher and to one other experienced teacher. Data collection is now complete.

The study is being supported by the DES.

Training of therapists. Therapists who participated in parent and teacher counselling and in play and group therapies attended a series of seminars; they attended a sensitivity group for a year and saw and treated clinic cases under supervision before starting on the planned intervention. Teachers were used for the remedial reading programme and all were trained by Stansfield and his colleagues at the Institute of Education. Aides in the nurture group were themselves mothers and were chosen on the basis of a judgement of their own warmth, empathy, spontaneity and sensitivity. The teachers who participated in the behaviour modification exercise were all volunteers who attended a series of seminars and workshops. Throughout the treatment programme they

consulted individually with the director of the behaviour modification programme.

Analysis. Because of an unequal distribution of diagnostic and treatment groups conventional covariant techniques are not applicable and a special programme has been devised by Garside.

The study has been funded by the DES.

F17 **Lask, B.** *(Department of Psychological Medicine, The Hospital for Sick Children, Great Ormond Street, London)* **A CONTROLLED TRIAL OF FAMILY THERAPY FOR ASTHMATIC CHILDREN**

This trial is designed to test the hypothesis that children receiving family therapy will have fewer and less intense attacks of asthma than children not receiving family therapy.

Children aged 4-14 in whom emotional factors are thought to be important are selected for consideration by a paediatrician. These children are then assessed and randomly assigned to a treatment or no treatment group. They are further assessed at the end of treatment and at intervals after that. Assessments include respiratory function tests and a daily diary record of asthmatic symptoms kept for a given period before assessment. Questionnaire and repertory grid measures of change in family relationships are taken. Treatment consists of psychotherapeutic sessions lasting 45 minutes at three-weekly intervals. The broad aim of the therapy is to improve coping behaviour, and the child's asthma is a focus around which discussion takes place.

The study is not funded independently but patients' travelling expenses etc. are met from a Departmental fund.

F18 **Lindsay, M.** *(Department of Child Psychiatry, Park Hospital, Oxford)* **EVALUATION OF GROUP PSYCHOTHERAPY**

A number of children with psychiatric problems, referred to the Park Hospital, are treated with group psychotherapy. Lindsay is setting up a systematic method of evaluating change during the course of such treatment. The treatment itself requires groups of up to 10 children to attend for 90 minutes weekly, the aim being to facilitate relationships and language amongst those who attend.

Parents also meet in a group which is designed to allow the participants to ventilate feelings and anxieties. The assessment consists of a standardised check list relating to the child's behaviour and emotions, and is completed monthly.

F19 **Norrish, M., and Godfrey, S.** *(Department of Paediatrics, Institute of Child Health, Hammersmith Hospital, London)* **BEHAVIOUR MODIFICATION IN CHILDHOOD ASTHMA**

A study is being undertaken into the effect of imaginal desensitisation on children with moderate or severe asthma. An initial survey of 63 children aged 8-15 has been undertaken, using clinical, physiological and psychological measures, in an attempt to predict which children would be most likely to respond to this type of treatment.

No clearly defined groups emerged from this survey and the detailed information on each child will therefore be used to identify differences between those children who respond to treatment and those who do not. The treated children will attend as out-patients and a control group of untreated children will be used. Both treated and untreated children will keep detailed records of symptoms and medication taken for one month before treatment starts, during treatment and for one month after treatment, to enable comparisons to be made between groups.

This study is being supported by the Leverhulme Trust through the Mental Health Research Fund.

F20 Ounsted, C. and Lynch, M. *(Department of Child Psychiatry, Park Hospital, Oxford)* PSYCHOPATHOLOGY AND PSYCHOTHERAPY OF CHILD ABUSE

Ounsted bases this research on the assumption that parents who physically abuse their children can be distinguished by various antenatal indices and other features that are apparent in the immediate postnatal stage. A unit exists at the Park Hospital where mothers, babies and other members of the family can be admitted for intensive psychotherapy. The aim of the present study is to evaluate the cost and efficacy of admitting mothers and infants to such a unit, as compared with intensive community support alone without admission. The project is in an early stage, and cases thought to be at risk by nurses or social workers at the John Radcliffe antenatal service are referred to Ounsted for evaluation. They are then assigned at random to either in-patient care or immediate community supervision. The regimes to be followed during the in-patient stay are not pre-determined but will include advice on family planning, attention to parental and sibling physical health and family group psychotherapy. The precise evaluation instruments have not yet been chosen but will include systematic follow-up of the health of all members of the family.

The project is being funded by Action Research for Crippled Children.

F21 Pinkerton, P. *(Department of Child Psychiatry, Royal Liverpool Children's Hospital)* ESTABLISHMENT AND EVALUATION OF A SERVICE UTILISING NURSES TO COUNSEL FAMILIES OF PSYCHIATRICALLY DISTURBED, PHYSICALLY ILL CHILDREN

Pinkerton proposes to introduce a scheme to train nurses attending the Liverpool course in Child and Adolescent Psychiatry in family counselling. It is planned to engage a full-time social worker who would both organise and evaluate the programme.

F22 Rutter, M., Hemsley, R., Howlin, P., Yule, W., Berger, M., and Hersov, L. *(Departments of Child and Adolescent Psychiatry and of Psychology, Institute of Psychiatry, and Maudsley Hospital, London)* AN EVALUATION OF A BEHAVIOURAL APPROACH TO THE TREATMENT OF AUTISTIC CHILDREN

Interest in the treatment of autistic children was initially stimulated by Lovaas's work on operant training methods. A pilot study was set up in the Maudsley Hospital to evaluate such treatment in an in-patient setting. However, it was found that children who had shown advances during their stay as in-patients sometimes relapsed rapidly after discharge. An attempt was then made to train parents attending the Hospital on an out-patient basis. Comparative observations in the clinic and at home showed that parent-child interactions in the hospital setting were often atypical. It was therefore felt that the most appropriate aim should be to establish a treatment regime in the child's own home using behavioural techniques, applied in a developmental context, together with family counselling.

The study involves the treatment and evaluation of 16 autistic boys, without obvious neurological disease, all with performance IQ in excess of 60, and two sets of autistic controls matched for age, IQ, social class, severity of symptoms and language level. Assessment includes detailed parental interviews, the maintenance by parents of regular diaries and observation of behaviour in the home. Treatment is focussed on the specific problems of individual patients and involves frequent consultation with the research workers. Evaluation is at 6-monthly intervals over an 18 month period.

The study is being supported by a grant from the DHSS.

F23 Tizard, J., Moss, P., Oppe, T.D, Bax, M., and others *(Thomas Coram Research Unit, Institute of Education, and St Mary's Medical School, University of London)* EVALUATION OF A COMPREHENSIVE MEDICAL AND SOCIAL SERVICE FOR PRE-SCHOOL CHILDREN AND THEIR FAMILIES

Two children's centres have been set up in the Bloomsbury and Paddington areas of London. The aim of these centres has been to provide a range of integrated medical, social and educational services for pre-school children in a geographically circumscribed area. The focus of the evaluation programme is to establish which types of problem can be usefully dealt with by such a service and to examine the demand for and use made of the services within the given catchment areas. This

is being done by a detailed assessment of all eligible children and their families within the catchment areas of the two centres and a control district. Evaluation is carried out before and one year after the establishment of the centres.

Enquiries cover both parents' and children's physical and mental health as well as the range and nature of the mother's social and family contacts, worries and satisfactions. The evaluation of child state is based largely on the schedule devised by Richman.

The study is being supported by the DHSS.

F24 Walk, D. *(Department of Child Psychiatry, St George's Hospital Medical School, London)* SURVEY OF PSYCHIATRISTS CONCERNED WITH CHILDREN AND ADOLESCENTS

The aim of this study is to identify which British psychiatrists are being called upon to deal with children and adolescents and to note their training and the setting in which they work. These questions are of importance in the planning of services - especially services for adolescents for whom there is an overlap between treatment by psychiatrists trained in adult and those trained in child psychiatry - and in planning an appropriate supporting network for the number of psychiatrists who are still employed by independent bodies and by local authorities outside the Health Service. Separate questionnaires are being addressed to individual psychiatrists and also to a variety of employing authorities in Great Britain.

The study is being supported by the DHSS and by the Royal College of Psychiatrists.

F25 Wright, H., and Payne, T. *(Portsmouth School Psychological Service)* EVALUATION OF A SCHOOL PSYCHOLOGICAL SERVICE

This is a survey of the working of the School Psychological Service in the City of Portsmouth.

The study will include a retrospective analysis of referrals during a 12-month period, with a limited follow-up assessment of a sub-sample of the group; a survey of teacher, social service worker and Health Service personnel attitudes towards the Service; a reading and behaviour survey and a general description of the workings of the Service, with particular reference to the amount of overlap between educational and clinical psychologists, and the contributions made by the service to inter-disciplinary decision making.

The survey is staffed by a full-time research worker and is being funded by a grant from the DES.

F26 Yule, W., Berger, M., and Wigley, V. *(Department of Psychology, Institute of Psychiatry, London and Department of Child Development, Institute of Education, London and ILEA)* TEACHER-CHILD INTERACTION STUDY

This investigation originated in a smaller study (Barcroft and Pope) which examined ways in which teachers unwittingly reinforced disruptive behaviours in primary school children. School staff who had taken part suggested that a course be started to train teachers in observation and behaviour control techniques. This was agreed to and systematic evaluation has been built into the training programme.

Since then, about fifty teachers have attended five courses of 8-10 two hour meetings which include both didactic and participatory instruction. Both teacher and general classroom behaviour are observed before, during and after the period of training. In addition, a sub-sample of teachers has taken part in a cross-over design evaluation in which behaviour changes in individual children with behaviour problems were compared with respect to their teacher's participation in the training programme.

See also:
A4 Cox et al. - Interviewing styles in diagnostic interviews with parents
A5 Freud et al. - Preparation of a manual for the research and service uses of the Hampstead Diagnostic Index and Profile
C21 Woolley and Townsend - A comparison of services for autistic children in two counties
C24 Shaffer - Behaviour change in enuretics during the acquisition of continence
H8 Worrall - Relationship of early teacher-pupil and pupil-teacher impressions to subsequent classroom achievement and behaviour

G – Development of children with family and social disadvantage

G1 Brown, G.W., and Harris, T. *(Social Research Unit, Bedford College, University of London)* STUDIES OF THE PART PLAYED BY LIFE EVENTS, LONG-TERM DIFFICULTIES AND FAMILY RELATIONSHIPS IN THE ONSET OF DEPRESSIVE ILLNESS

This series of studies has sought to relate the prevalence of depression in women to proximate precipitants (e.g. life events) to factors which increase or reduce vulnerability to precipitating factors (e.g. family composition, employment, emotionally supportive relationships), to factors which determine the form of the psychiatric disturbance, such as the early loss of a parent, and to factors which lead to or inhibit access to psychiatric treatment.

Clinical and general population samples have been studied in both urban and rural communities. Although the focus of the Unit's research has been on depressive disorder as manifest in the adult, it is of direct relevance to child psychiatry both at a theoretical level in the way that it seeks to identify factors which lead to domestic dysfunction and at a purely practical level in the methodological work that is being carried out on the development of measures of family life (see A2).

It is proposed to extend this research with a large scale longitudinal study which would allow a closer look at the process of becoming depressed and at the factors which influence recovery and chronicity.

G2 Coffield, F.J., Robinson, P.E.D., and Sarsby, J. *(Department of Education, University of Keele)* CONCEPTUAL AND EMPIRICAL STUDY OF THE THESIS OF TRANSMITTED DEPRIVATION

The aim of this study is to generate hypotheses about the mechanisms of transmitted deprivation. The central focus is an anthropological study of a small number of problem families on a poor housing estate. The investigators are contacting successful and unsuccessful members of families who have been in serious difficulties.

G3 Dixon, P., and Rutter, M. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* SOCIAL RELATIONSHIPS AND SCHOOL ADJUSTMENT OF CHILDREN IN LONG-TERM RESIDENTIAL CARE

The aim of this study is to examine the effects of multiple caretaking experiences on later educational achievement and on social adjustment.

Twenty 5-9-year-old children, in residential care since their first year of life, but at present attending a normal primary school, are being compared with a matched group of children, brought up within their natural family. The measures that are being used to compare the children include behaviour questionnaires, interviews with teaching staff about the range and intensity of the child's social relationships and direct school observations, again with an emphasis on social behaviours and also on task oriented behaviour. Assessment includes measurement of IQ and detailed enquiry into the previous range and nature of relationships in the institution and at home.

The study is being supported by the SSRC.

G4 Gath, A. *(Department of Psychiatry, University of Oxford)* THE EFFECT OF MATERNAL AGE ON THE SUBSEQUENT EMOTIONAL BEHAVIOUR OF FIRST-BORN CHILDREN

Gath had earlier undertaken a study on the impact of Down's syndrome children on their normal siblings. This investigation included a number of families with elderly mothers, some of whom were late in starting their families (these tended to be more anxious and tense), and others with large families reaching the end

of a lengthy reproductive life. Problems in these latter families were linked to family size. The aims of the present study are to investigate the findings further by examining whether elderly first-time mothers have particular difficulties in child rearing, and hopefully identifying factors which mitigate these difficulties.

First-born children of mothers aged over 35 years at the time of their birth between 1963-1966 were identified through the Oxford Record Linkage system. Children still living within a defined radius of Oxford town centre have been matched with a group of children the same age whose mothers were aged less than 20 at their birth, and with children of intermediately aged mothers attending the same school class as the index children. The assessment comprises a lengthy semi-standardised interview, adapted from the schedules devised by Rutter and Graham. There is special emphasis on the mother's early gynaecological history and her anxieties over child handling. There is in addition an assessment of the child's behaviour and popularity at school.

This research is being supported by the MRC.

G5 Geber, B. *(Department of Social Psychology, London School of Economics, University of London)* THE PREDICTION OF ABUSE IN CHILDREN

The aim of this study is to examine the feasibility of devising a scheme to identify children at risk from later abuse.

Pilot work is being undertaken to develop methods which would include both an antenatal questionnaire and, later, observations of mother and infant. Questionnaires have been obtained from 20 working class and 20 middle class primiparous mothers. A small number of these have subsequently been observed with their infants.

G6 Lambert, L., and Essen, J. *(National Children's Bureau, London)* CHILDREN WHO HAVE BEEN IN CARE

This is a study of data from the National Child Development Study (1958 cohort). Comparisons are being made between children taken into care before the age of 7 and those who came into care between ages 7 and 11.

Attainments and adjustment are being studied with reference to number of placements, age at first placement, reasons for going into care and type of care arrangement. The data are being examined longitudinally to study the earlier adjustment of children who were to go into care for the first time between the ages of 7 and 11.

This study has been supported by the SSRC, Nuffield Foundation, DES and DHSS.

G7 Mayall, B., and Petrie, P. *(Thomas Coram Research Unit, Institute of Education, University of London)* A STUDY OF CHILD-CARE BY CHILD MINDERS TOGETHER WITH A COMPARISON OF CHILDREN'S INTERACTION WITH THEIR PARENTS AND WITH THEIR CHILD MINDER

This is a further investigation in the Unit's general programme of examining the social development of children in a variety of custodial and educational settings. Registered child minders have been identified in a number of London boroughs. Children's social behaviour during an interview with the minder is compared with behaviour during an interview with the mother. The child's language development is assessed at a separate session. The quality of care offered by minders who have minded children for over 10 months has been compared with that offered to children minded for less than 10 months.

The investigation is being supported by the DHSS.

G8 McGlaughlin, A., Empson, J., and Kendrick, P. *(Family Studies Unit, Department of Social Administration, Hull University)* MOTHER-CHILD INTERACTION AND THE RANGE OF PSYCHOSOCIAL DEVELOPMENT

This study examines intragenerational effects by comparing child-rearing behaviours in sibling mothers. It is argued that an intragenerational effect would be demonstrated if sisters brought up by the same mother were more similar in their child-rearing behaviour than unrelated women brought up by different

mothers. The presence of intragenerational effects would justify the search for intergenerational continuities in child-rearing behaviours.

Twenty-eight socially disadvantaged mothers and their sisters, each with a child under the age of one year, are being studied (i.e. 56 mother-child dyads). Two mother-child interaction sessions are videotaped at home at 12, 18 and 24 months of age. A number of measures of interaction are obtained from a time sampled inspection of videotape. Note is being made of the variant and invariant elements of interactions and of individual differences amongst the children, both during interview and from the video recordings. The relationship to educational attainment will eventually be established.

The study is supported by the SSRC as part of the 'cycle of deprivation' contract.

G9 Pollak, M. *(Department of Child Health, King's College Hospital Medical School, London)* A FOLLOW-UP OF 'TODAY'S 3-YEAR-OLDS'

This work involves a follow-up of a cohort of 167 children, drawn from a single general practice in inner London and originally seen at the age of 3. In that study development was referred to indices of social deprivation.

Of the original sample 130 have been followed up at the age of 9 and are being interviewed at school. Intelligence, reading and perceptual abilities are being assessed. Parents are completing a social questionnaire and head teachers have been asked to rate the children with respect to achievement and behaviour.

It is proposed to contrast changes in development of children who are still living in adverse circumstances with those whose environmental conditions have improved.

The study is being supported by a grant from the DHSS.

G10 Rapoport, R.N. *(Institute of Family and Environmental Research, London)* TRANSMISSION OF MALADAPTIVE COPING PATTERNS

This is an intensive study of a small, strategically selected series of families of school leavers with long-standing problems of parental social adjustment. The goal of the study is to learn more about the forces inside the families affecting the transmission of maladaptive coping patterns at school leaving age.

G11 Rutter, M., and Quinton, D. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* CHILDREN IN RESIDENTIAL CARE

It is widely held that adverse experiences in childhood in some way influence later parenting behaviour and that it is in this way that a 'cycle of disadvantage' might become established. The present study aims to examine this hypothesis.

The study is in two parts. The first compares the current parenting behaviour and childhood experiences of parents with a child newly admitted into care for the second time with those of parents of a randomly selected control group of children living in the same geographical area.

The aim of the second part of the study will be to examine how many of the children who experienced early adversity are now experiencing difficulties with their own families and to contrast them with subjects who are managing without difficulty. The sample will consist of young adults who were the subjects of an earlier study by Tizard on children in care. The current state can therefore be related to early contemporary data of good quality. A control group will be drawn from individuals studied in a general child population study. Particular emphasis is being placed on identifying factors which enable individuals to cope well in adult life in spite of adverse experiences in childhood.

The study is being supported by the SSRC.

G12 Rutter, M., Quinton, D., and Yule, B. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* FAMILY PATHOLOGY AND DISORDERS IN CHILDREN

An earlier study showed that psychiatric disorder was more common in the parents of child psychiatric patients than among parents of control children. That study

was cross-sectional, relied on case notes, and used a child-patient based sample. These limitations precluded the examination of the direction of effects and the magnitude of the link between parental and child disorder. The present study aimed to overcome these difficulties. A consecutive series of parents with children of school age or younger presenting with a new psychiatric disorder were identified from the Camberwell Register. Patients and spouses were interviewed as soon as possible after the initial contact and at yearly intervals for the following four years. Assessment laid emphasis on the current psychiatric state of parents and children and on family interactions and relationships. Data from a general population survey were used for comparison. Data collection has been completed and is in the course of analysis.

The project has been supported by a grant from the Foundation for Child Development, USA.

G13 Stone, F., Brebner, C.M., and Stanfield, J.P. *(Department of Child and Family Psychiatry, Royal Hospital for Sick Children, Glasgow, and Department of Social Paediatrics, University of Glasgow)* RISK FACTORS IN ADOPTION

The aim of this study is to develop a method for predicting successful adoption. The strategy that has been used is to interview adoptive parents shortly after placement, and again when the infant is 6 months old. The interview has an open-ended as well as a structured component. Each child is assessed developmentally. The study is largely a descriptive one. Adoption agencies in the west of Scotland refer the families on an unselected basis.

The study is being supported by the Scottish Home and Health Department.

G14 Streather, J. *(National Children's Bureau, London)* A STUDY OF ILLEGITIMATE AND ADOPTED CHILDREN

This investigation makes use of data from the National Child Development Study (1958 cohort; examination at ages 7 and 11; see B4). An analysis of the development of illegitimately born children at the age of 7 suggested their poor attainment and adjustment was a consequence of family circumstance. This did not take account of the contribution that adverse perinatal factors and social disadvantage might have made to poor outcome. These effects are being examined in the present study, which also uses longitudinal data to investigate the effects of change in family circumstance. As a group, illegitimately born children tend to move from single to two parent families and can be contrasted with children whose parents have separated.

G15 Tizard, B., and Hodges, J. *(Thomas Coram Research Unit, Institute of Education, University of London)* A FOLLOW-UP OF 8-YEAR-OLD CHILDREN WHOSE EARLY YEARS WERE SPENT IN RESIDENTIAL CARE

This continues a study into the reversibility of early depriving experiences. Groups of children who had spent their early years in an institution were first identified and assessed at the age of 2. At 4½ the behaviour and cognitive development of those who had remained in an institution were contrasted with that of those who had either been adopted or restored to their natural parents. In the present follow-up, the children are being assessed at the age of 8. A contrast group of London working class children has been studied throughout.

Behaviour is being assessed with a modified version of the interview used on the Isle of Wight survey and with a teacher questionnaire based on the Rutter B scales, and by direct observation made during psychological testing.

The study is being supported by Dr Barnado's Society.

G16 Tonge, W., and Lunn, J. *(Department of Psychiatry and Department of Community Medicine, University of Sheffield Medical School)* FOLLOW-UP OF THE MARRIED CHILDREN OF SOCIALLY DEPRIVED FAMILIES

The aim of this study is to examine continuities in attitudes and social adjustment between deprived parents and their offspring. Special emphasis is being placed on the study of socially successful children of the problem family group.

The subjects are the married children of parents who were originally studied by Tonge some years ago. In that study the psychiatric state of 33 families who had received help from a number of social agencies was contrasted with a similar number of families matched for age and street of residence who had not had such help. In assessing the children of the original groups emphasis will be placed on IQ and personality, criminality and employment record, attitudes to education and authority and the adjustment of their children (third generation) at school and at home.

This study is supported by the SSRC.

G17 Wolkind, S., Hall, F., Pawlby, S., Reichstul, L., Zajicek, E., Clark,B.E., Higham, M., and Kruk, S. *(Department of Psychiatry, London Hospital Medical College)* A LONGITUDINAL STUDY OF CHILD DEVELOPMENT IN AN INNER LONDON AREA

The aims of this study are to examine: (a) the value of certain early behaviour in predicting later disturbances; (b) the relationship between these disorders and (i) earlier disturbance in the mother and (ii) individual differences in the child; and (c) the interaction between individual differences in mother and in child. Two research approaches, epidemiological and ethological, are used. Each examines its own hypothesis, but in addition the relationship between the two approaches is constantly examined.

The groups being studied consist of (i) a random sample of mothers(n=107), (ii) a group with a high level of psychological and social difficulties (n=[illegible], of whom 15 also appear in the random group, (iii) a group of non-cohabiting single mothers (n=80). Psychological and social difficulties used to select group ii are factors which are commonly held to increase the risk for developing later emotional difficulties. Eighty of the mothers (30 from group i and 25 each from groups ii and iii) make up the epidemiological sample.

The methods of investigation include antenatal interview with the mother to assess her mental state and obtain a history of her own early experiences. After delivery, the infant's state is assessed on the Brazelton scale. Further interviews and observation sessions are held at 4, 14 and 24 months. A variety of interactional and child measures are obtained and these provide an opportunity for a validation with the mother's account of similar behaviours.

A study is being made of the second children born to these families with a view to examining changes in the mothers' child-rearing practices and siblings' similarities of temperament.

The investigation is being supported by the MRC and the SSRC.

See also:

A15 Coleman et al. - Development of an instrument to measure attitudes of children's caretaking
B1 Brandon et al. - A feasibility study into the further follow-up of the Newcastle 1000 Families Survey
B2 Butler et al. - Child Health and Education in the Seventies
B4 Kellmer Pringle et al. - National Child Development Study (1958 Cohort)
B7 Rutter et al. - Psychiatric disorder and educational attainment in a metropolitan area and an area of small towns
C16 Pollak - Investigation of the relationship between social deprivation and delay in speech development
D2 Butler et al. - Housing problems of neurologically handicapped persons in an urban community
D14 Shaffer and Sandberg - The role of neurological soft signs, minor stigmata and environmental factors in determining psychiatric disorder in childhood
D22 Bentovim - Retrospective case study of children referred to a hospital after parental abuse
E5 Illsley et al. - Social and medical follow-up of low birth weight infants
F5 Irwin et al. - Survey of teenagers admitted to children's and community homes, residential maladjusted schools and hospital adolescent units
F15 Jehu et al. - Behaviour modification with children in the care of a social services department
F20 Ounsted and Lynch - Psychopathology and psychotherapy of child abuse
K4 Davey and Pushkin - A study of racial awareness and prejudice in young children
K9 Louden - A comparative study of self-esteem and locus of control in majority and in minority group adolescents

H – School influences on behaviour

H1 Butler, N., Dowling, S., Howlett, B., and Osborne, A., *(Department of Child Health, University of Bristol)* A NATIONAL SURVEY OF BRITISH PRE-SCHOOL AND DAY-CARE PROVISION

This is a questionnaire survey of the organisation, resources and activities of approximately 20 000 nursery schools, classes, playgroups and day nurseries in the United Kingdom. Pre-school institutional data will be linked to that of individual children included in the Child Health and Education in the Seventies study (B2) to provide information on the relationship between pre-school experience and development and behaviour at age 5. This study will also provide information on the regional distribution of provision for young children, the extent to which differing facilities duplicate and complement each other and the extent to which disadvantaged children are benefitting from pre-school services.

The study is supported by the MRC, the National Birthday Trust Fund and the Readers Digest Association.

H2 Connolly, K., and Smith, P. *(Department of Psychology, University of Sheffield)* DETERMINANTS OF SOCIAL INTERACTION AND PLAY BEHAVIOUR AMONG PRE-SCHOOL CHILDREN

This experimental study investigated the effect on children's behaviour of variation in space and play materials, amount of teacher intervention and group size. Groups of normal children under age 5 drawn from a defined catchment area were studied.

The project was undertaken in three phases, each with a duplicated cohort and each lasting the duration of a school year. The behaviour of the children was studied by trained observers in the nursery using a time sampling technique.

During the first phase of the study, size and amount of play and teaching material were varied within the constraints of Department of Education recommendations.

During the second phase of the study, teachers varied their style of interaction with the children. During 'free play' periods the staff were available, but interaction was maintained at a high level. Approaches were varied within a single day's session.

During the final phase of the study, the classes were constituted in such a way that group size varied from 10-30 during the course of the year. By using data obtained from the two previous phases of the study, it was possible to allow for the secondary effects of varying group size on room density and availability of resources.

The study has been supported by the SSRC.

H3 Hughes, M., and Pinkerton, G. *(Thomas Coram Research Unit, Institute of Education, University of London)* DIFFICULTIES EXPERIENCED BY CHILDREN STARTING PRIMARY SCHOOL

The aim of this research is to study the prevalence of children's problems during their first few weeks at school and to relate these to earlier care and to family and demographic factors. Teachers are further being interviewed about their expectations for children starting school. It is hoped that this will provide information that is relevant to the aims of a pre-school service.

Teachers at thirteen infant schools serving areas covered by experimental children's centres (see Tizard et al., F23) are being interviewed, and have been asked to complete individual questionnaires on two cohorts of children entering

their schools for the first time. The questionnaire is adapted from that developed by Thompson for the National Foundation for Educational Research and covers the children's social behaviour, self reliance, task oriented behaviour and language.

This research is being funded by the DHSS.

H4 Pinkerton, G., and Hughes, M. *(Thomas Coram Research Unit, Institute of Education, University of London)* AN EVALUATION OF SCHEMES IN WHICH DAY NURSERY CHILDREN ATTEND NURSERY SCHOOLS OR CLASSES

Part-time nursery schemes allow children to attend a day nursery for several hours a week. The aim of this study is to assess the educational value of these schemes and to note difficulties or stresses which might result from the discontinuous pattern of care and education.

The study is supported by the DHSS.

H5 Reynolds, D., Jones, D., and St. Leger, S. *(MRC Epidemiology Unit (S. Wales), Cardiff, and Department of Social Administration, University of Cardiff)* SECONDARY INFLUENCES IN PUPIL DEVELOPMENT

The stimulus for this study came from Power's findings that secondary schools appear to exercise an influence on the behaviour of adolescents which is independent of area or family factors and bias in pupil intake. This study aims to look at organisational factors within the school which might lead to such differences.

The present study is being carried out in 9 secondary schools which serve a precise catchment area, and which draw their intake from a number of distinct primary schools.

Outcome criteria from 800 pupils in their final and penultimate year at school consist of attainment results, police and truancy records, self reports of delinquency and vandalism, and a variety of attitude tests.

A home interview is held with the parents of each child, focussing on social and demographic variables and on enquiry into parents' education. A social malaise inventory has been constructed for each of the schools' catchment areas. Differences in school intake are being examined on a cohort of 250 newly admitted children. This cohort has of course come in to the school some years later than the out-going cohort, but will have been drawn from the same catchment area. Organisational differences within the school are obtained in part by direct observation and in part from simple school statistics.

The study is being supported by the MRC.

H6 Rutter, M., Maughan, B., Mortimore, P., and Ouston, J. *(Department of Child and Adolescent Psychiatry, Institute of Psychiatry, London)* SECONDARY SCHOOL INFLUENCES ON CHILDREN'S BEHAVIOUR

Previous studies have shown major differences between schools in the prevalence of psychiatric disorder and delinquency. The supposition has been that factors within schools may influence a child's behaviour for better or worse. The present study has been designed to investigate these influences.

One of the major problems in previous research has been the lack of information about the children at the time they entered school, which made it difficult to separate the effects of selective intake from the effects of the school itself. However, an earlier study undertaken in this Department obtained information on adjustment and attainment on a total sample of children just before secondary school transfer. The children were re-investigated during their third year in secondary school.

Information on the children's characteristics at age 10 years prior to secondary transfer enables the expected prevalence of behavioural deviance and reading difficulties at age 14 years to be predicted. Twelve non-selective secondary schools were then chosen for intensive study. These varied markedly in terms of their level of deviance and difficulties being higher or lower than expected on the basis of their intake. They included both co-

educational and single sex, denominational, voluntary and county schools. The research team, which is blind to the categorisation of the different schools, is currently studying a variety of institutional features of these schools to relate them to outcome.

The study is supported by the DES.

H7 Tizard, B., Carmichael, H. Hughes, M., and Pinkerton, G. *(Thomas Coram Research Unit, University of London)* A STUDY OF NURSERY SCHOOL CHILDREN'S CONVERSATION WITH TEACHERS AND WITH PARENTS

This work is an extension of Tizard's research into the social environment of nursery settings. The intention is to compare various aspects of talk between working and middle class children and their teachers, and between the same children and their mothers. Conversations will be recorded by radiomicrophone and analysis will show who initiates a conversation, the context of the conversation, the range of content within a conversation and the type of cognitive demands that parents and teachers make upon the child in their talk with them.

The investigation is being supported by the SSRC.

H8 Worrall, N. *(Department of Child Development and Educational Psychology, Institute of Education, London)* RELATIONSHIP OF EARLY TEACHER-PUPIL AND PUPIL-TEACHER IMPRESSIONS TO SUBSEQUENT CLASSROOM ACHIEVEMENT AND BEHAVIOUR

The aims of this research are: (a) to analyse the process of impression formation between pupil and teacher; (b) to examine whether impression feedback to either party can bring about an effective change in each other's perception; and (c) to assess whether feedback results in improved classroom satisfaction and achievement. It also aims to delineate the stage at which impressions are formed and the extent to which impressions depend on the amount and quality of interaction.

In the main study the experimental groups will have brief weekly sessions of two-way information exchange between pupil and teacher; the effects of these exchanges on mutual impressions, classroom achievement and adjustment will then be monitored over the school term. Pupils in comparison groups will spend an equivalent time either: (a) alone with the teacher, but in reading practice rather than information exchange, or (b) in reading practice, without the presence of the teacher.

This study is being supported by a project grant from the SSRC.

See also:

A12 Rutter et al. - Preparation of manual for the Rutter 'B' scale
C28 Fogelman - Age of starting school and attainment and adjustment at 11
C30 Jones and Currell - Effects of anxiety on academic attainment in primary school children
C34 Thakur - Comparison of school attainment of two groups of English born West Indian children whose parents were or were not respectively influenced by western missionaries while still in the West Indies
C35 Wedge and Robinson - Study of regional differences in educational attainment
F25 Wright and Payne - Evaluation of a school psychological service
F26 Yule et al. - Teacher-child interaction study
K10 Lynam - Informal groups among adolescent girls in the classroom situation

I – Personality and individual differences

I1 Giuganino, B., and Hindley, C. *(Department of Child Development and Educational Psychology, Institute of Education, University of London)* PERSONALITY CONTINUITIES DURING CHILDHOOD

The stability of a number of personality variables between ages 3 and 11 is being studied, utilising interview and observational data obtained from the Institute of Education longitudinal study.

The project is supported by the Leverhulme Trust.

I2 Kolvin, I., and Scott, D. *(Nuffield Child Psychology and Psychiatry Unit, Newcastle upon Tyne)* LONG-TERM FOLLOW-UP OF TEMPERAMENTAL CHARACTERISTICS IN TWINS

Fifty sets of like-sexed twins (25 monozygotic and 25 dizygotic) were identified in 1962. These were assessed at the ages of 5 and 7 using a variety of temperamental measures and in-depth interviews. These will be repeated at the age of 14. The preliminary findings are as yet unpublished. The workers now propose to study these twins specifically to investigate the long-term stability of temperamental and behavioural factors and their relationship to cognitive and genetic factors.

I3 Little, B. *(Department of Psychology, Keele University)* INDIVIDUAL DIFFERENCES IN AUTONOMIC NERVOUS SYSTEM RESPONSES IN CHILDREN DURING PERCEPTUAL MOTOR PERFORMANCE

Approximately 180 children in the Birmingham School District have been screened with the Rutter B scale to identify extreme groups of children with conduct and neurotic disorder. A number of measures of autonomic responsiveness in two groups are then recorded during psychometric testing.

Little is being supported by an SSRC studentship.

I4 Powell, G. *(Department of Psychology, Institute of Psychiatry, London)* A DEVELOPMENTAL STUDY OF SOCIAL LEARNING, PERSONALITY AND CLINICAL DISORDER

This is a study which sets out to investigate how personality, as measured on the Eysencks' PEN questionnaire might, through facilitating or inhibiting social learning, predict deviance of attitudes and behaviour, and how the quality of predication varies with age and sex.

Tests have been carried out on 808 white school children from 7 schools, across 6 different age groups. They were tested on the PEN questionnaire and were also asked to complete a test of social attitudes, a social perception test and a self-report misbehaviour test. A behaviour rating was obtained by teachers.

The study is being supported by a grant from the SSRC.

I5 Wood, M. *(Unit for Research into the Medical Applications of Psychology, Cambridge)* STABILITY OF INDIVIDUAL DIFFERENCES IN EARLY CHILDHOOD

The aim of this study is to examine the stability of certain individual differences in children - in particular, those relating to attention and activity - and to investigate the interaction of congenital and environmental factors in their development.

Twelve first-born middle-class normal children and their mothers are being studied during the first 10 days of life, and again at 6 and 10 months. Initial observations of the mother and child focus on an analysis of interaction

in the feeding situation and an assessment of the child's state using the Bell sucking test and a modified version of the Brazelton Scale. Examinations at 6 and 10 months include the objective measurement of gross motor activity (using an Actometer), measurement of attention span and an assessment of the mother's behaviour with particular reference to her tempo and style of interaction.

The study is being supported by the SSRC.

See also:

A17 Dunn and Wooding - Validity and stability of the Carey Scale of Temperamental Characteristics
A19 Hindley and Medjuck - The stability of measures of personality in adolescence
B8 Venables - Study of the transmission of autonomic abnormality in selected Mauritian children and in adult schizophrenics
B10 West and Farrington - Cambridge study in delinquent development
J3 Costello - A twin study of infant effects on mother-infant interaction
J5 Dunn and Wooding - An observational study of first-born children before and after the arrival of a sibling

J – Development of communication and social relationships within the family

J1 Blurton Jones, N. *(Department of Growth and Development, Institute of Child Health, University of London)* DEVELOPMENTAL STUDIES OF MOTHER-CHILD ATTACHMENT

The aims of these related longitudinal studies are: (a) to examine the relationship between behaviours which are commonly held to be indicators of 'attachment'; (b) to study the continuities and fluctuations of these behaviours in a given mother-child pair over time; (c) to look at the extent to which either mother or child initiates or maintains behaviours which lead to proximity; and (d) to examine how the child's behaviour varies with differing degrees of maternal 'responsiveness' and in particular how this responsiveness influences the child's language development.

The first study has examined 60 'normal' legitimate first-born children (30 male, 30 female) of middle-class parents. Parent and child have been seen at 6 monthly intervals between the ages of 15 and 51 months. Each assessment has included observations made on mother and child alone and together, both at home and in the laboratory, and in a small group setting in the laboratory and in a park. In addition to direct observation, information about the child's and family's social contacts and other background factors have been obtained by interview. Individual differences amongst the children are assessed on the Reynell Test of language development and on the Stanford Binet. Data collection has been completed, but it is proposed to undertaken a further limited educational and cognitive assessment of the children at ages 5 and 7.

A grant has been received to replicate the middle class study on a sample of non-deprived working class children. Most previous studies on attachment have been done on middle class families. By extending the study in this way it is hoped that a wider range of maternal response styles can be studied and it may also be possible to investigate whether social class related differences can be held to account for later differences in school achievement.

The studies are supported by the SSRC.

Elaborations and variations in this programme of research include studies in other cultural settings which use broadly similar methods.

(a) Developmental Study of Mother-Child Attachment in Malaysia (Blurton Jones, N., and Woodson, R.)

In this investigation Malay, Chinese and Tamil mother-child pairs were studied in part to assess the consistency and variation of observable behaviours in families from widely differing cultures and in part to investigate whether the items of behaviour chosen for the study in the British investigation have a more universal application.

(b) Developmental Study of Mother-Child Interaction in the Navajo (Chisholm,J., Department of Anthropology, Rutgers University, and Blurton Jones, N.)

The Navajo were chosen for study because of their characteristic use of the cradle-board. This has been held to account for the Navajo child's alleged shyness and characteristic gaze aversion. In this study particular emphasis is being placed on the measurement of individual differences (using the Brazelton scale) and on the frequency and ways with which mothers respond to cues from the infant, both when on and off the cradle-board.

All of these studies rely on direct observation techniques and a number of methodological studies have been planned which are listed separately in section A.

The Navajo and Malaysian studies were supported by the Harry Frank Guggenheim Foundation.

J2 **Bruner, J.** *(Department of Experimental Psychology, University of Oxford)*
THE TRANSITION FROM PRE-LINGUISTIC TO LINGUISTIC COMMUNICATION

This programme of research into the structure of prelinguistic communicative behaviour of children is directed to the hypothesis that a first spoken grammar is based upon fundamental concepts that the child has already learnt with an adult caretaker. It has been preceded by two pilot studies which set out to identify characteristic sequences of joint mother-infant activity and attention and which also developed a functional coding system that could be systematically applied for interactional data.

Mother-infant interactions are being recorded at home and in the laboratory with particular interest being shown in the development of anticipatory signalling, in patterns of interaction and differentiation of roles and in the mother's understanding of her child's non-linguistic signals. Of particular interest is the way in which mother and child manage to refer to the same object, and how the infant manages to get others to conform to its intentions.

The research team, which comprises three research assistants, a paediatrician, a psycholinguist and a number of PhD students, is also engaged in a series of subsidiary projects, which include: (a) a study, using spectrographic analysis, of the differentiation of infant cries and vocalisations within a situational context (Leslie and Pratt); and (b) an investigation into the extent to which infants follow changes in adult gaze direction (Scaife).

This programme of research is being supported by the SSRC.

J3 Costello, A. *(MRC Unit for the Study of Environmental and Physical Factors in Mental and Physical Illness, London)* **A TWIN STUDY OF INFANT EFFECTS ON MOTHER-INFANT INTERACTION**

It is likely that a mother's interaction with her infant will be modified by her experience of rearing other children and by the demand characteristic of older siblings. By examining the interactions of first-born twins with their mother, it is possible to isolate the effect on the mother of infant characteristics. Costello is investigating mother-child behaviour in 125 first-born twins, identified during pregnancy. The investigation includes a neonatal assessment followed by weekly interviews until the twins reach the age of 13 weeks. Interviews continue with decreasing frequency until the age of 4. Data on the distribution of behaviour of mother and children over 24 hour periods are obtained from a 'diary' interview. The diary record has in turn been checked electronically in a sub-sample of children and was found to provide a valid record at least during the first year of life (see A16). As well as studying infant-parent interactions, it is hoped to contrast monozygotic and dizygotic pairs on a number of behavioural and developmental variables and to compare twins with a singleton sample.

J4 Dunn, J., *(MRC Unit on the Development and Integration of Behaviour, Madingley, Cambridge)* **MOTHERS' BEHAVIOUR AND THE QUALITY OF CHILDREN'S PLAY**

It is likely that early play provides an opportunity to acquire skills which will later be of value at school. In a pilot study, it seemed that a child's persistence at play could be dramatically increased by parental involvement. Differences in involvement might therefore contribute to later differences in school performance. This study aims to examine the relationship between maternal involvement and the quantity and complexity of a child's play.

Forty mother-child pairs - 20 working class and 20 middle class - are being observed at home on two occasions each at 18, 24 and 36 months. The focus of study is on verbal exchanges between mother and child in different activities. Contexts associated with features of maternal speech and thought to be particularly valuable for the child's language development are of special interest.

J5 Dunn, J. and Wooding, C. *(MRC Unit on the Development and Integration of Behaviour, Madingley, Cambridge)* **AN OBSERVATIONAL STUDY OF FIRST-BORN CHILDREN BEFORE AND AFTER THE ARRIVAL OF A SIBLING**

Earlier work at this Unit - using primate behaviour as a model for the study of infant response to separation - indicated that the quality of the mother-child

relationship before separation was the best predictor of the response to separation. The present study is looking at the same problem in humans by examining the quality of mother-child relationship before the birth of a sibling and relating this to the child's responses to the sibling's arrival. Particular emphasis is being laid upon the contribution that individual (temperamental) differences make to this response. It is also intended to study the growth of the relationship with the new sibling.

The subjects are 40 working-class two-parent families whose first-born child is under the age of 2½. Home observations are carried out before the birth of the second child and again when the second child is aged 3 weeks, 8 months and 14 months. Observations are being supplemented by interviews and questionnaire data. Methodological problems in the assessment of temperament in young children are also being examined in this study (A16).

J6 Foss, B., and Wells, P. *(Department of Psychology, Bedford College, London)* THE IMITATION OF SPECIFIC BEHAVIOURS IN INFANCY

The present study arose out of an interest in the role of reinforcement in infant imitation. During the course of earlier observations with mothers and their young infants it seemed that imitative sequences were most often initiated by the mother.

The present study sets out to confirm whether this is so, and whether the length of an imitation sequence depends on who initiates the interaction and to note which partner usually terminates an interaction. Nine normal mother-infant dyads are being observed at home twice weekly from birth until 7 months in both unstructured and contrived situations.

Proposals for an extension of this research include contrasting mothers who imitate a great deal with those who do not with respect to other aspects of mother-infant interaction and to differences in infant language development.

J7 Geber, B. *(Department of Social Psychology, London School of Economics, University of London)* MOTHER-CHILD INTERACTION IN DIFFERING TASK CONDITIONS

The aim of this study is to investigate the changes that are brought about in a mother-child interaction by the imposition of a stress factor.

Twenty middle class mother-child pairs are being studied on a single occasion in the laboratory. In a balanced design, mothers are instructed to play together with their 3½-4-year-old child on a constructional and copying task. The task is set both with and without a time limit and the sessions are video-taped. Note is taken of eye-gaze, amount and content of verbal interaction and physical contact under each condition.

J8 Gray, H. *(Child Development Research Unit, University of Nottingham)* MOTHER-INFANT INTERACTION IN A REACHING TASK

The aim of this study is to examine the communicative events which take place before and during a giving-and-taking task. Infants are observed receiving a rattle from their mother and taking a similar rattle presented mechanically. Analysis is from videotaped recordings.

J9 Gregory, S., Mogford, K., and Newson, J., *(Child Development Research Unit, University of Nottingham)* INTERACTION BETWEEN MOTHERS AND THEIR DEAF INFANTS

Methods have been developed at this Unit for the study of interaction in normal infants and mothers (see Newson and Pawlby, J15). By using similar methods on abnormal groups, it is hoped to be able both to define prerequisites of normal development and to assist in the understanding of the difficulties of handicapped children.

In this study, early communication between mothers and their deaf children will be studied using video techniques.

J10 Jones, O., and Newson, J. *(Child Development Research Unit, University of Nottingham and Queen Mary's Hospital, Carshalton)* A COMPARISON OF INTERACTIONAL BEHAVIOUR BETWEEN MOTHERS AND NORMAL INFANTS AND MOTHERS AND INFANTS WITH DOWN'S SYNDROME

This study follows the same general strategy as that of Gregory et al. (J9). Down's syndrome infants were chosen because it can be predicted from an early age that they will be less responsive and active than normal infants. They therefore provide a useful model for studying the role of the infant in mother-infant interaction. This study also aims to examine the strategies employed by mothers with unresponsive infants and to examine the proposition that reduction in pre-verbal communication will lead to a delay in language development.

J11 Mills, M. *(Department of Psychology, Bedford College, London)* A DEVELOPMENTAL STUDY INTO DISCRIMINATION OF VOICES AND FACES DURING INFANCY

Earlier studies from Bedford College showed that the 3-week-old infant is able to differentiate between its mother's and strangers' voices. The present study, by using a longitudinal method, aims to identify more precisely the time at which auditory and visual discrimination takes place and also, by a series of experiments, to investigate whether early discrimination is mediated through any particular vocal component.

Experiments are started during the first week of life and utilise analysis of contingent 'comfort' sucking to indicate the infant's discrimination. The mother's live and taped voice is compared with the voice of a stranger and a taped laryngograph to identify significant vocal characteristics.

The study is being supported by the SSRC.

J12 Mills, M., Wells, P., Christy, M., and Oppe, T. *(Department of Psychology, Bedford College, and Departments of Obstetrics and Child Health, St Mary's Hospital Medical School, London)* MOTHERS' PSYCHOPHYSIOLOGICAL RESPONSES TO INFANT CRYING

Child abuse is said, in some cases, to be triggered by infant crying behaviour. This study - still in a preliminary phase - proposes to look at mothers' psychophysiological responses to infant cries. It is proposed to couple these measurements to other observations of mothers' behaviour.

J13 Murray, L. *(Department of Psychology, University of Edinburgh)* THE EFFECT OF PERTURBATIONS OF MOTHER CONTACT ON INFANT BEHAVIOUR

Pilot work suggested that interruptions of a mother-infant interaction were often followed by an alteration of behaviour in the infant. These include autistic-like activities such as hand-regard, gaze aversion, fingering of the subject's own body or clothing, or alternatively a reduction in activity, or 'protest' behaviour with an increase in activity, such as crying.

The present set of experiments is using the infant's response to perturbations to investigate the relative importance of a number of different features of the mother's presence in maintaining an interactive situation. Seven mother-infant pairs are seen weekly from 6-12 weeks of age. Various aspects of the mother's appearance and behaviour such as eye-gaze, vocalisation patterns, physical contact, overall stimulus complexity and in particular the phasing and contingency of her responses, are manipulated experimentally, and their importance is gauged by the infant's response to their alteration.

Murray is supported by an SSRC studentship grant.

J14 Newson, J., Newson, E., Barnes, P., and Key, D. *(Child Development Research Unit, Nottingham)* A LONGITUDINAL STUDY OF CHILD REARING IN NOTTINGHAM

The aim of this study has been to describe what it is like to bring up children of different ages in Nottingham. The study began back in 1960 with a sample of

700 families stratified for social class. The families have since been interviewed when the index child has reached the age of 4, 7, 11 and 16. There has been moderate attrition of the original sample, which has been dealt with at each age by 'topping up' the social class cells to their original number.

The use of the longitudinal data has so far been limited. This has partly been due to the way that early data have been stored. However, all data from this study are now being entered into the SSRC data bank which will facilitate later longitudinal analysis.

Data collected from children at the age of 11 are now being analysed. These have been derived from a structured but open-ended interview with mothers. Results of the 11-plus selection tests and school welfare records as well as a reading attainment test on a subsample of 200 children have also been collected. The analysis will focus on styles of parental control as a function of social class, relating rearing patterns to later delinquency, progress at school and an examination of childrens' attitudes to sex-role activities, and so on.

Data are being collected on the 16-year-olds during 1976. In addition to an interview with mothers, the children are also being interviewed about a variety of values and beliefs, and about their sexual and other relationships. The interview data are being supplemented with details of school-leaving qualifications and a study of educational welfare records.

The 16-year-olds have been asked to contact the Department when they have their first baby and it is hoped that they can be re-examined at that time.

The interviews developed for the 4- and 7-year-old examinations are also being used in several other studies.

(a) Child Rearing Practices in Punjabi Immigrant Families (Deysangh, J.)

This study is based on a Punjabi translation of an enlarged and modified version of the 7-year interview. A mixed group of Punjabi immigrant families are being seen and the rearing patterns of those born in the UK are being contrasted with those born in the Punjab.

(b) Child Rearing Practices in Jamaican Immigrant Families (Grace, A.)

This study is similar to that described in J14a.

See also:

K1 Barnes and Scaife - A study of adolescent aspirations, attitudes and beliefs.

The major study is supported by the Nuffield Foundation, the SSRC and the University of Nottingham.

J15 Newson, J., and Pawlby, S. *(Child Development Research Unit, University of Nottingham)* A STUDY OF MOTHER-INFANT COMMUNICATION

The aims of this study are to look at various aspects of pre-linguistic communication between mother and child, in particular, to examine how imitation evolves, who initiates imitative interactive sequences, and which element of non-verbal communication, e.g. gaze direction or head orientation, facilitates the continuity or inhibition of interaction.

Eight normal mother-infant pairs are being studied weekly when the child is aged between 4 and 10 months; interactional sequences are filmed on videotape and then subjected to a 'micro-analysis' to note sequential relationships.

J16 Richards, M., and Dunn, J. *(Unit for Research on Medical Applications of Psychology, Cambridge)* THE CAMBRIDGE LONGITUDINAL STUDY OF CHILD DEVELOPMENT AND MOTHER-CHILD RELATIONSHIP

This is a study of 77 normal first- and second-born children delivered at home between 1968 and 1970, which has combined home observations, interviews, the keeping of diaries, and a wide range of psychological tests at different ages.

A principal focus of interest within the study has been to assess the extent to which later development can be predicted from measures obtained during the first 10 days of life. Mothers and infants were seen intensively at that time and observations were made, both of their interaction together and of the infants' neurological and behavioural state.

Follow-up visits were undertaken at 8, 14, 20, 30 and 60 weeks, at age 3 and finally at age 5½. Data collection has been completed and data analysis is now focussing on: (a) the use of cluster techniques to identify relationships between early and late findings; (b) contrasts in development between different social class groups, between breast and bottle fed children, and between first and second-born children; (c) the differences between persisting and declining traits; (d) relationships between early styles of mother-infant interaction and later cognitive and language development; and (e) apparent effects of analgesic medication given to the mother at delivery and other obstetric factors.

This study has been supported by the Nuffield Foundation and more recently by the SSRC.

See also:

K8 Light and Antonis - Role taking at age 4 and at age 5½

J17 Schaffer, H.R. and Crook, C. *(Department of Psychology, Strathclyde University)* MATERNAL CONTROL TECHNIQUES

Schaffer and his colleagues are undertaking a programme of linked studies to examine how maternal behaviours interweave with those of the infants. Mothers and their infants are recruited for these studies from local welfare clinics and the dyads are then observed and filmed in the laboratory in a number of experimental situations. A large number of interaction measures are derived from the filmed data and Schaffer intends that one of the tasks of the programme be to develop a repertoire of measures for use in observational research. Previous studies in this programme have included investigations of visual attention between mothers and infants and of vocal turn-taking. In this particular attention was paid to the initiation of interactions and to the ways in which mothers and infants harmonised their activities.

The present investigation aims to study the strategies used by mothers in directing or controlling their 1-2-year-old children's behaviour. Mothers are set the task of getting their children to play with a toy and move from one part of the laboratory to another. The techniques that they use in getting the child to attend, to move, to play and to release the toy are studied. Attention is paid to the varying success of different strategies and to their relationship to social class and to the child's age and other individual characteristics.

This research is being supported by an SSRC programme grant.

J18 Schaffer, H.R., and Messer, D. *(Department of Psychology, University of Strathclyde)* MATERNAL LABELLING STRATEGIES

The aim of this study is to investigate the ways in which a mother's verbal references to an object (labelling) within a play situation relate to the interactive context of that situation. These sessions are filmed and the sequences of activities and the behavioural co-occurrences of labelling are noted from this record.

The study is part of a programme of research into socialisation processes in infancy supported by the SSRC.

J19 Sturge, C. *(The Maudsley Hospital, London)* THE REACTION OF FIRST-BORN CHILDREN TO THE BIRTH OF A SIBLING

The aim of this study is to plot the natural history of young children's response to the birth of a younger sibling, and to relate this to temperament and dependancy in the older child, to the sex of the sibling, and to age differences between them. Subjects are recruited from mothers with a first-born child age 4 or under, attending the Hammersmith Hospital antenatal clinic during their second pregnancy. The method of investigation includes the use of

a semi-structured interview and an infant temperamental characteristics schedule. Interviews are held initially during the antenatal period and thereafter when the second child is aged 3 weeks, 4 months and a year.

J20 Willatts, P., and Brown, A. *(Department of Psychology, University of Dundee)* THE DEVELOPMENT OF MOTHER-CHILD INTERACTIONS DURING EARLY LIFE

This is a study into individual differences between mother-child interactions during the first 12 weeks of life and the later consequences of such interactions. Twenty normal mother-infant dyads are being videotaped during brief play sessions in the laboratory and at home. Emphasis is being placed on an analysis of sequences of behaviours within interactions.

Brown is in receipt of an SSRC studentship.

J21 Wilson, F., and Shepherd, J. *(Department of Psychology, University of Aberdeen)* THE DEVELOPMENT OF SEX-ROLE BEHAVIOUR IN YOUNG CHILDREN

The interaction of mother with first- and second-born children aged 18-24 months is being observed in a number of situations in the laboratory, and the extent to which the behaviour of both depends on the sex of the child is being analysed. Preliminary results suggest that the mother's behaviour towards her second child depends on the sex of her first-born child.

See also:

A2 Brown et al. - The development of measures of married women's current life styles and subjective experiences
A14 Blurton Jones - Investigation into methodological problems of human observation studies
A16 Douglas et al. - Development of instrumentation for the measurement of certain infant and mother-infant behaviours
D26 Markova and Forbes - The mother-child relationship in haemophiliacs of pre-school age
E4 Harvey et al. - A study of babies in incubators
E6 Jaques et al. - An evaluation of the effects of increasing maternal involvement in the care of children in a neonatal intensive care unit
E7 McGurk - A study into the effect of very early separation between mother and child
E9 Richards and Brimblecombe - The frequency of parents visiting infants in an intensive care unit
G4 Gath - The effect of maternal age on the subsequent emotional behaviour of first-born children
G5 Geber - The predication of abuse in children
G8 McLaughlin et al. - Mother-child interaction and the range of psycho-social development
G12 Rutter et al. - Family pathology and disorders in children
G13 Stone et al. - Risk factors in adoption
G17 Wolkind et al. - A longitudinal study of child development in an inner London area
K2 Blatchford and McGurk - A study of peer interactions between the age of six months and two years and its relationship to maternal attachment
K12 Martlew - Patterns of speech by pre-school children to peers, adults and the mother

K – Development of extra-familial relationships: attitudes and role-taking formation

K1 Barnes, P., and Scaife, J. *(Child Development Research Unit, University of Nottingham)* A STUDY OF ADOLESCENT ASPIRATIONS, ATTITUDES AND BELIEFS

Interview data are being collected from 16-year-old children who were in the Nottingham longitudinal study of child rearing (J14). The interview is concerned with educational and occupational aspirations, which will then be related to data collected at the time of earlier assessment.

K2 Blatchford, P. and McGurk, H. *(Department of Psychology, University of Surrey)* A STUDY OF PEER INTERACTIONS BETWEEN THE AGE OF SIX MONTHS AND TWO YEARS AND THEIR RELATIONSHIP TO MATERNAL ATTACHMENT

The purpose of this study is to establish age norms for the ways in which infants make social contact with each other, and to relate their infant-infant social behaviour to the relationship with their mother. Six pairs of infants at five age levels - ranging from 9 to 25 months - are being observed together, in an unstructured laboratory situation. Each infant is also observed separately when alone with its mother. In addition group activity in a play-group of 16-21-month-old toddlers is studied to examine the nature and extent of the infants' social contact during and after the process of getting to know each other.

K3 Chapman, A., and Foot, H. *(Department of Applied Psychology, University of Wales, Institute of Science and Technology)* A SOCIAL PSYCHOLOGICAL INVESTIGATION OF CHILDREN'S RESPONSIVENESS IN HUMOROUS SITUATIONS

The aim of this project is to investigate the social responsiveness of children in humorous situations and to study the processes, whereby the expression of intimacy behaviour is facilitated. This is being done by examining children's responsiveness to one another in humorous situations. A series of experiments is being carried out in which small groups of children are videotaped as they watch either comedy or non-humorous films. The composition of the groups is varied in a balanced design and includes same sex and mixed sex dyads of similar or differing ages watching with friends and strangers.

The study is being supported by the SSRC.

K4 Davey, A.G., and Pushkin, I. *(Undergraduate School of Studies in Social Sciences, University of Bradford)* A STUDY OF RACIAL AWARENESS AND PREJUDICE IN YOUNG CHILDREN

This is a study of racial attitudes in groups of 7-11-year-old children of varying ethnic origin. The design is such that comparisons can be made between children attending schools with a high or low concentration of immigrants, and children living in areas with and without contact with immigrants in the community. This study will use various sorting tasks, puzzle techniques, sociometry and direct interview techniques. It is a development of an earlier study on younger children.

This study is being supported by the SSRC.

K5 Fluck, M. and Phillips, T. *(Department of Social Studies, Portsmouth Polytechnic and Department of Education, Bishop Otter College, Chichester)* FAMILY POSITION AND STRUCTURE AND PEER ATTRACTION IN THE EARLY SCHOOL YEARS

This study aims to examine the extent to which a child's experiences with its siblings influence the social strategies employed with peers and consequently its attractiveness to peers. The number, age and sex of the siblings of 1046 infant school pupils are being recorded and related to a number of sociometric measures.

K6 Hoy, E.A. *(Department of Psychology, Queen's University, Belfast)* DEVELOPMENT OF CHILDREN'S COMMUNICATION SKILLS IN DYADIC PEER INTERACTION SITUATIONS AND THEIR RELATIONSHIP TO SOCIAL CLASS AND COGNITIVE STYLE

It is felt that social role-taking is important in the development of empathic communication. The aim of this investigation is to trace the developmental course of social role-taking.

Varying groups of normal and retarded children, differing in age and contrasted for social class and for conceptual style (reflectiveness/impulsivity) have been filmed whilst teaching a specially designed game to a peer. Other measures of peer communication in a less structured situation are also being examined.

K7 Jahoda, G. *(Department of Psychology, University of Strathclyde)* USE OF ALCOHOL AND ATTITUDES TOWARDS ALCOHOL IN 10-14-YEAR-OLD CHILDREN

An earlier cross-sectional study by Jahoda suggested that whilst 5-10-year-old children were generally critical of the use of alcohol and its effects, these attitudes had changed strikingly by the age of 14.

The present study looks at the process of this change. Approximately 300 children between the ages of 10 and 14 will be individually tested on a repertory grid. If sufficient resources are available it is hoped to back up individual tests with parental interviews.

The study is being supported by the Scottish Home and Health Department.

K8 Light, P., and Antonis, B. *(Department of Psychology, University of Southampton, and Unit for Research on Medical Applications of Psychology, Cambridge)* ROLE-TAKING AT AGE 4 AND AT AGE 5½

This study considers relationships between role-taking (i.e. the child's ability to perceive the perspectives of other people and to see himself as part of a bigger group), cognitive development and parental influence.

Subjects are children in the Cambridge longitudinal study (see Richards and Dunn J16). Cognitive development is measured on the Stanford Binet and on a range of Piagetian tests and role-taking is assessed using structured games described in other studies (Flavell). The mother's response style is assessed at interview, and school adjustment is being measured with the Bristol Social Adjustment Guide.

The Cambridge longitudinal study is being funded by the Nuffield Foundation and by the SSRC.

K9 Louden, D.M. *(SSRC Research Unit on Ethnic Relations, University of Bristol)* A COMPARATIVE STUDY OF SELF-ESTEEM AND LOCUS OF CONTROL IN MAJORITY AND IN MINORITY GROUP ADOLESCENTS

The hypothesis being tested is that adolescents in a minority group situation will externalise the majority group evaluation of their group and view their own group in a positive light. Also, that there will be no significant difference in the levels of self-esteem among Asian, West Indian and English adolescents in English multi-racial schools.

Three groups of adolescent (n=375) 14-16-year-olds, in the middle stream of five schools in Birmingham were matched for parental occupation and for the racial composition of the school. A minimum reading age of 10 was required.

The study is being supported by the SSRC.

K10 Lynam, L. *(Department of Psychology, University of Manchester)* INFORMAL CLASSROOM GROUPS AMONG ADOLESCENT GIRLS

One hundred and ninety-two 13-14-year-old girls have been studied in two comprehensive schools with a view to defining the structure and functions of small groups formed by the girls.

Sister Lynam is supported by an SSRC studentship.

K11 **Manning, M., Heron, J., and Marshall, T.** *(Psychology Department, University of Edinburgh)* INVESTIGATION OF PATTERNS OF HOSTILITY IN CHILDREN

The aims of this investigation have been, (a) to distinguish styles of hostile or aggressive behaviour from observations of young children in a naturalistic setting and to classify these according to the context in which they occur, and (b) to examine both the family and the wider behavioural correlates of these groupings.

Seventeen children were observed in their nursery and infant schools, initially at age 4 and subsequently at age 7. Family interactions have been observed at a specially staged tea party, and in addition more general behaviour assessments were obtained by the use of parental interviews and the Rutter Teacher and Wolff Parent Questionnaires. Although numbers in the initial project have been small, Manning feels that she has been able to identify groups of children who differ with respect to their predominant styles of aggressive or hostile behaviour. The groups show some consistency in behaviour over time and reflect differing styles of family interaction and degrees of behavioural pathology. Manning intends to replicate various aspects of the study on a larger sample. This will also enable her to investigate the influence of social class and sex, family size and position.

The study has been supported by the Mental Health Trust and Research Fund and by the SSRC.

K12 **Martlew, M.** *(Department of Psychology, University of Sheffield)* PATTERNS OF SPEECH BY PRE-SCHOOL CHILDREN TO PEERS, ADULTS AND MOTHER

A comparison of the patterns of speech used in two different playgroup environments, one highly structured and adult directed, the other child centred with little guidance or direction from staff, was undertaken. Two groups of 20 children were observed over a period of 6 months and ten 3 minute samples of speech obtained for each child. In addition a survey of mothers' speech to children was made on the same sample in a series of different situations: a simple description task, a complex arrangement task, story telling and play. In total 41 mothers were recorded talking to their children.

A study is in progress designed to describe patterns of verbal communication in a group of young children recorded in the nursery, talking to their mothers, and on their entry into the first school. The aims of the investigations are to explore factors eliciting certain ways of speaking in different environments and to compare maternal styles with the child's communicative ability in the nursery and during the early period at school. Analysis covers form, function and effectiveness of speech.

See also:

A9 McMillan et al. - Development of sociometric techniques for the identification of isolated and rejected children
A18 Hinde et al. - Peer-peer relationships in 3-4½-year-olds
D27 Markova and Forbes - Self perception and risk taking behaviour in haemophilic and other handicapped children
H2 Connolly and Smith - Determinants of social interaction and play behaviour among pre-school children
H3 Hughes and Pinkerton - Difficulties experienced by children starting primary school
H5 Reynolds et al. - Secondary school influences in pupil development
H6 Rutter et al. - Secondary school influences on children's behaviour
H7 Tizard et al. - A study of nursery school children's conversations with teachers and with parents
H8 Worrall - Relationship of early teacher-pupil and pupil-teacher impressions to subsequent classroom achievement and behaviour

4. Overview

British research has made a very considerable contribution to academic child psychiatry over the past decade. It has been particularly productive in the areas of epidemiology and neuropsychiatry and in the study of mother-child relationships and has brought about important advances in an impressive number of areas, e.g. the development of measures of child and family disorder; the prevalence of disorder in the general population; the classification of childhood disorder; the contribution of parental illness and school and social factors to the development of disorder; the relationship between learning backwardness and behaviour disturbance; the nature of autism; the relationship between neurological and psychiatric disorder; the effects of institutionalisation; and the immediate and later effects of separation. At the time this survey was carried out, it was apparent that there was continuing strength and activity in research on classification, neuropsychiatry, the role of school and family factors and childhood autism. In addition, there is very wide interest in early mother-child interaction, the effects of obstetric intervention on early attachment, the importance of individual differences in both mother and child, child development and child rearing in disadvantaged groups and the psychiatric aspects of elimination disorders.

A particular strength of British research has come from its interdisciplinary nature, which has drawn and continues to draw on the skills and perspectives of psychiatrists, psychologists, ethologists and sociologists. In his recent monograph on the history of the child development movement in the United States, Senn (1976) quotes a research psychiatrist who is talking about his department of psychiatry in a leading university:

> We have tremendously gifted child psychologists, world famous people who are doing very good work on motivation, on perception and cognitive development in children and on socialisation, and here we are at, I think, one of the best centres of child psychotherapy and nobody talks. Our trainees don't go over there, much as their trainees don't come over here and nobody talks.

The same could not be said for the - admittedly few - centres of academic child psychiatry in the United Kingdom. Interdisciplinary contacts are the rule and are actively sought. The converse - contact originating from the leading child development centres and directed towards child psychiatrists - seems to occur less often. This may be because, with few exceptions, the major child development centres are situated at some distance from academically active departments of child psychiatry.

A further strength of British child psychiatry has been its readiness, in contrast to child psychiatry on the Continent and in the United States, to move away from a narrow and necessarily unrepresentative clinic-referred base towards studies of disorder in the community. This orientation, coupled with the comprehensive health and social service systems, may account for British success in epidemiological research.

The aforesaid, coupled with the very bulk of this survey, might suggest that academic child psychiatry in Great Britain is particularly vigorous and in no need of special support. However, that would be seriously misleading. In part, the size of the present report reflects the method chosen in describing separately certain studies, which overlap operationally, yet which address themselves to distinct issues. More importantly, the size is a consequence of the scope of the enquiry, which embraces work that is being done in departments of paediatrics, obstetrics, sociology, psychology and education, as well as in purely psychiatric units. This in turn reflects the wide range of disciplines that give priority to research into childhood disturbance. It will also be apparent that the greater part of worthwhile research is being done in very few centres. These have in common senior staff with tenure, a commitment to research coupled with strong clinical links, an eclectic outlook and readiness to work across disciplines. Units of this sort permit continuity of research, in which early work defines the focus for each subsequent investigation, they

provide time for the preparation and refinement of methods and they are able to attract workers of good calibre. Ideally, the work carried out in these successful departments should complement, rather than replace, research carried out in less specialised settings, for these may have access to unique clinical material. Clearly, a prerequisite is an awareness of research issues and basic method and this is most likely to be acquired by a period of training in an academically active department. Clinical research can also be facilitated by establishing a sound record system in individual departments and by the organisation of single projects based in several centres. This may not only have direct research benefits, but also secondary advantages of increasing research interest and experience amongst the participants. Only one multi-centred research project was noted in compiling this survey.

Given an adequate research base, there are a number of areas which seem ripe for development.

Methodology

Behaviour inventories vary in their sensitivity to disorder in different sexes and at different ages. It would ultimately be helpful to have a range of scales appropriate to different ages and sexes. There is a particular deficiency of information on the short-term stability and sensitivity of existing measures. Instruments of this sort are likely to provide a valuable stimulus to treatment research.

A number of mother-infant researchers commented on a lack of agreement about which observational measures were most reliable or meaningful. Lack of this information may lead to the accumulation of many data of uncertain value and difficulty in comparing studies originating in different centres.

Prevalence and natural history of disorder

The few studies that have been carried out into continuity between child and adult disorder have illustrated the value of this research. Such studies are important, not only in defining natural history of disorder, and in so doing sharpening diagnostic concepts, but also because they provide much needed information on resistance to and recovery from stress and disadvantage. Studies of this sort are amongst those which could most readily be mounted by clinicians with limited research resources. Yet little use is being made of clinical case material for follow-up. One way of stimulating this type of research would be by encouraging the establishment of sound record systems which facilitated easy retrieval of clinical data.

The national longitudinal studies represent a major research investment. They contain a potential for research beyond the range of interest of any one unit. A way of extending the value of the large studies and overcoming the limitations of quality of data would be by using their populations as a sampling frame within which more intensive study could be carried out. The Collaborative Study on Cerebral Palsy, organised by the National Institute for Neurological Disease and Stroke in the United States, has been used for this purpose. It allows for the assembly of large and representative samples of uncommon conditions and has greatly facilitated control matching. Use of the national surveys in this way would inevitably require access to the data by interested and approved researchers, and full discussion of ethical implications.

Clinical Research

Emotional and conduct disorders account for approximately 85 per cent of psychiatric disturbances in childhood. Other conditions such as childhood autism, disorders of communication and primary eating or habit disorders account for a relatively small proportion of cases. Arguably the most dramatic advances in the treatment of psychiatric illness in adults have been in the treatment of affective disturbance. Continuities between child and adult disorder are strongest between conduct disorder in childhood and later personality and sociopathic disorders. For all or any of these reasons, one might have expected that the greatest body of clinical research would be directed towards conduct or emotional disorder. Yet, as examination of

sections C and D in Chapter 3 shows, these areas are the least researched, with more interest being shown in the rarer disorders of communication, in the less troublesome or handicapping habit disorders and disorders of elimination, and in the relatively less prevalent disturbances amongst children with physical illness.

The need for further research into the affective disorders is especially great There is confusion and uncertainty about their genesis, manifestations and treatment. Research strategies could include the differential response of clinically defined groups to anti-depressant treatment or - by drawing a parallel with affective disorder in adults - through the examination of relationships between certain childhood symptom complexes and recent life events.

Another important, and neglected, area of clinical research lies in the so-called hyperactivity syndrome, barely acknowledged in Great Britain yet the most frequently used child psychiatric diagnosis in the United States. It is important to clarify the rather nebulous concept of 'activity', to examine its relationship to organic factors in a representative sample of children, and to explain the reasons for the British-American discrepencies. There is an almost complete absence of studies into the genetic contribution to childhood disorder, and with one exception, no research into psychophysiological aspects of mental illness in childhood.

It is worthwhile asking why this survey found so much clinical research addressed to relatively uncommon or mild conditions. Perhaps one of the reasons lies in the close link between many child psychiatrists - especially those working in teaching hospitals - and paediatricians. Child psychiatry departments were often sited within a children's hospital; child psychiatry is usually taught to students during their paediatric block and links with paediatricians may be developed at the expense of those with colleagues in the behavioural sciences. This process, coupled with the psychiatrists' own medical and paediatric training, may lead to an emphasis in treatment and research on the psychiatric problems of physically ill children or of children presenting with physical symptoms, such as disorders of eating, sleeping or elimination or delay in language. This is illustrated by the greater amount of research interest in such problems. Yet, although important, these disorders are much less of a burden within the community than emotional or conduct disturbance unassociated with physical illness.

Obstetric and neonatal factors

Obstetric care has changed radically over the past decade and both obstetricians and paediatricians are clearly concerned about the effects of their treatment on the long-term development of the child. Excellent antenatal care units are now functioning which could provide a good clinical base for appropriate longitudinal research. Studies on both neurological and social interactions in 'normal' mothers and infants have provided methods for the study of pathological groups. This is an area which seems particularly attractive to joint study by developmental scientists and clinicians. It must be said that the quality of behavioural assessment of several of the existing follow-up studies was disappointing. Populations, which, from a paediatric point of view, had been collected and investigated with great care, were being studied in a naive fashion, often by simply applying a 'test', without due regard to its limitations. In general, inadequate call is being made in this area on behavioural scientists with special experience in psychiatric research.

Treatment

Surprisingly few drug studies were noted during this review, although drug treatment presents many unresolved problems. These include the pharmacotherapy of emotional disorder, the prediction of response to drug treatment, the mechanisms of drug action in treating childhood disorder, their efficiency over the long term, the value or dangers of drug treatment with neurologically impaired children, the use of differing response to drugs in identifying distinct clinical entities and studies into unwanted cognitive and behavioural effects of anticonvulsant drugs. Methods are available for the study of many of these problems.

The great majority of disturbed children and their parents referred for treatment in the United Kingdom receive some form of psychological treatment, either in the form of individual or family psychotherapy or as counselling. Methods are available for studying outcome, and there are, equally, techniques for examining at least some of the interactions that take place during treatment. These need to be applied to the long standing questions of efficacy and suitability for therapy, and treatment type/patient specificity. 'Parent education' is a growing field in the United States yet there was only a single study which worked with parents as the intervening agents.

An increasing number of children are taken into care, often for only a brief period, and investigations into the impact of children's homes on children's immediate and later behaviour would seem especially valuable.

The American literature on drug and behaviour therapy suggests that the most productive treatment research is carried out by a limited number of specialised units which apply carefully developed methods to a number of different treatments. It should be noted that there are no specialist children's departments in Britain equivalent to say Conner's former unit at Massachusetts General Hospital or to Sprague's unit at the University of Illinois, which have undertaken a large number of drug studies, nor (outside the field of subnormality) do any compare to Patterson's unit in Oregon, Bricker's department in Kansas or to Marks's unit at the Institute of Psychiatry, London, which have concentrated in a similar way on behaviour treatments. It may be that important advances in treatment methods will need to wait until the establishment of specialist units of that sort. Intervention studies are in some respects the most demanding form of research endeavour. Methodological issues require meticulous attention. In order to obtain adequate numbers, it may be necessary to operate a study from several treatment centres, obtaining the cooperation and involvement of other independent clinicians. Yet such research impinges on clinical responsibility and raises ethical problems which place a particular strain on multicentred investigations. Psychiatric handicaps are often of a chronic nature and the patient's crisis and long-term needs must be catered for by an adequate back-up organisation.

Perhaps it is because of these difficulties that some 'action research' workers - especially those involved in changes of institutional practice - eschew formal evaluation or measurement as being at best meaningless and at worst misleading. It is claimed that it is not possible to measure the complex effect that research itself will have on the institution being studied, that the benefit that will accrue from intervention is often self-evident, and that the researcher does best to accept the role of participant observer. This nihilistic approach is regrettable for evaluation and controlled changes are possible, although difficult, and in the absence of a systematic approach it may not be possible to generalise from individual research findings.

Development of children with family and social disadvantage

Children from impoverished families and children whose parents are neglectful or mentally ill are at risk of the later development of disorder. Studying these families provides an opportunity to tease out the factors which may protect the child from likely disorder and which may assist in devising programmes for prevention. Examining the child's response to a change in circumstance can equally be of help in formulating a rational approach to treatment. Research covered in this section included examples of each which illustrate its particular importance for child psychiatry.

It should be noted that the emphasis in this area on affectional and social development contrasts with and complements the emphasis of the effects of disadvantage on cognitive development which characterise a great deal of American research.

Individual differences

This is an area widely acknowledged to be of great importance in determining vulnerability or resistance to stress. However, most of the research is being carried out on children during their first five years of life. The stability of differences and their relationship to vulnerability during the years of middle childhood and adolescence remain largely uncharted. The relationship between behavioural differences and differences in autonomic

responsiveness is similarly under-researched as is the relative importance of inheritance and imposed biological factors.

Studies of normal development

In contrast with the best psychiatric research, which relies heavily on work with other disciplines, few of the developmental studies were undertaken in collaboration with psychiatrists. The most elegant and carefully constructed studies emanating from developmental laboratories had carefully chosen 'normal' subjects for study. Yet invariably the researcher would preface an introduction to the work by acknowledging its potential usefulness to a clinical problem, but emphasising the necessity of defining norms before examining pathology. For a child psychiatrist it would be difficult not to ask whether this two stage approach was really necessary. Rather it seems likely that the inclusion of abnormal 'contrast' groups at the very beginning will serve to highlight significant processes rather than to cloud them. The psychiatrist might help the developmental psychologist by providing approaches to the measurement of difference and disturbance in the mother and by identifying problems around which the basic scientist could focus his expertise.

That being said, it must be acknowledged that the existing group of research projects - if fulfilled - could lead the clinician to a better understanding of, for example, how individual characteristics of the child may interact with those of the mother, the impact of so-called 'normal' stresses such as the birth of a sibling, how better to rear handicapped children, or what behaviour of the mother to foster or reinforce in deprived or deviant families, and so on.

The bulk of developmental work concerned the development of mother-child interaction with far less interest and investment in the study of peer interactions. Yet from a clinical point of view, peer interactions may be of great importance. For example, difficulty in making friends is a characteristic feature of disturbance in children; sociometry has been shown to be a particularly sensitive indicator of treatment effects; it seems likely that peer influences are important in determining disorder, at least in secondary school, and peer reinforcement may significantly interfere with adults' attempts to modify behaviour in disruptive and disturbed children. Very little is known about the development or determinants of those social skills that children use to acquire esteem and popularity, nor about the ways in which children influence each other's cognitive and moral development and these would seem to be useful areas for further research.

The large number of units mentioned in this survey indicates that perhaps the size of the research community has now increased beyond a point where all interested people can know about each other's work. Certainly, researchers were keen to know, and at times surprised to hear about,related research. One way of meeting this need would be to maintain and circulate a simple register of new grant-supported research in the field of normal and abnormal child behaviour.

In conclusion, there was an overall impression of enthusiasm, vitality and activity in the centres able to devote resources to full-time research. This was in contrast to manifest problems experienced in units with heavy teaching or clinical responsibilities where despite great willingness and interest research could be overwhelmingly difficult. Unless the contributions of the busy clinicians are to be lost ways need to be found to assist the part-time researcher. This could be done, for example, by improving academic opportunities for trainee child psychiatrists, by establishing clinical research units which would aim to work with or through clinicians and by methodological work which would aim to prepare reliable and valid instruments for use by clinical researchers.

The size of the problem of childhood disturbance is very large and existing methods of prevention and treatment are woefully inadequate.

Research Units

Aberdeen
University, Department of Child Health
Department of Psychology

Bangor
University College of North Wales, Department of Psychology

Belfast
Queen's University, Department of Psychology

Birmingham
Charles Burns Clinic
Hollymoor Hospital, Department of Child Psychiatry

Bradford
University, Undergratuate School of Studies in Social Sciences

Bristol
University, SSRC Research Unit on Ethnic Relations
University Medical School, Department of Child Health
Department of Mental Health

Burley in Wharfedale (Yorkshire)
High Lands Hospital

Cambridge
MRC Unit on the Development and Integration of Behaviour
University, Institute of Criminology
Psychological Laboratory
Unit for Research on Medical Applications of Psychology

Cardiff
MRC Epidemiology Unit
University College, Department of Social Administration
University of Wales Institute of Science and Technology,
Department of Applied Psychology

Colchester
Essex University, Department of Sociology

Dundee
University, Department of Child Health
Department of Psychology

Edinburgh
Department of Special Education Services, Lothian Region
University, Department of Criminology
Department of Psychology
University School of Medicine, Department of Psychiatry

Exeter
Royal Devon and Exeter Hospital

Glasgow
Royal Hospital for Sick Children, Department of Child and Family Psychiatry
Strathclyde University, Department of Psychology
Department of Social Administration
University, Department of Medicine
Department of Social Paediatrics

Guildford
Surrey University, Department of Psychology

Hull
University, Family Studies Unit, Department of Social Administration

Keele
University, Department of Education
Department of Psychology

Leeds
High Royds Hospital
University, Department of Education
Department of Psychiatry

Leicester
University, Department of Psychiatry
School of Social Work

Liverpool
Royal Liverpool Children's Hospital, Department of Child Psychiatry

London
Charing Cross Hospital Medical School, Department of Child Health
City University, Department of Social Sciences
Guy's Hospital, Newcomen Centre
Hammersmith Hospital, Department of Child Health
Hampstead Clinic
Hospital for Sick Children, Great Ormond Street,
Department of Psychological Medicine
Department of Renal Medicine
Inner London Education Authority, Research and Statistics Group
Institute of Family and Environmental Research
King's College Hospital Medical School, Department of Child Health
London Hospital Medical School, Department of Psychiatry
Maudsley Hospital
MRC Unit for the Study of Environmental Factors in Mental and Physical Illness
National Children's Bureau
Queen Charlotte's Hospital, Department of Paediatrics
Queen Mary's Hospital
Royal Free Hospital School of Medicine, Department of Psychiatry
Royal National Throat, Nose and Ear Hospital, Nuffield Hearing and Speech Centre
St Charles' Hospital, Department of Paediatrics
St George's Hospital Medical School, Department of Child Psychiatry
Department of Psychiatry
St Mary's Hospital Medical School, Department of Obstetrics
Department of Paediatrics
Tavistock Institute of Human Relations
University of London
Bedford College, Department of Psychology
Social Research Unit
Birkbeck College, Department of Psychology
Institute of Child Health, Department of Growth and Development
Department of Paediatrics and Neonatal Medicine
(Hammersmith Hospital)
Department of Psychological Medicine
Institute of Education, Department of Child development and Educational Psychology
MRC Developmental Psychology Unit
Thomas Coram Research Unit
Institute of Psychiatry, Department of Child and Adolescent Psychiatry
Department of Psychology
MRC Social Psychiatry Unit
London School of Economics, Department of Social Psychology
University College Hospital Medical School, Department of Paediatrics
Westminster Hospital, Department of Child Psychiatry

Manchester
Uni ersity, Department of Child Health
Department of Obstetrics
Department of Psychology

Newcastle upon Tyne
Nuffield Child Psychology and Psychiatry Unit

Nottingham
University, Child Development Research Unit, Department of Psychology
University Medical School, Department of Orthopaedic Surgery
Department of Psychiatry

Oxford
Park Hospital, Department of Child Psychiatry
Department of Neurophysiology
Department of Psychiatry
Radcliffe Infirmary, Department of Paediatrics
University, Academic Department of Psychiatry
Department of Experimental Psychology
Warneford Hospital

Portsmouth
Polytechnic, Department of Social Studies
School Psychological Services

Sheffield
University, Department of Psychology
University Medical School, Department of Community Medicine

Southampton
University, Department of Psychology

Stirling
University, Department of Psychology

York
University, Department of Psychology

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